



# 2002 Annual Report

Vital Statistics of Massachusetts



Massachusetts Department of Public Health  
Public Document No. 1

GOVDOC  
6457  
.1  
2002





The Commonwealth of Massachusetts  
Executive Office of Health and Human Services  
Department of Public Health  
250 Washington Street, Boston, MA 02108-4619

DEVAL L. PATRICK  
GOVERNOR

TIMOTHY P. MURRAY  
LIEUTENANT GOVERNOR

JUDYANN BIGBY, MD  
SECRETARY

JOHN AUERBACH  
COMMISSIONER

August, 2007

To the Honorable Clerks of the  
Senate and House of Representatives:

We have the honor to submit as required by Chapter 111, Section 2 of the General Laws, the one hundred sixty-first annual report on statistics of births, deaths, marriages and divorces in Massachusetts for calendar year 2002. The information will also be available to the public via the Department of Public Health website at <http://www.mass.gov/dph>.

Since 1964, the ANNUAL REPORT OF VITAL STATISTICS has been published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

A handwritten signature in black ink that reads "Stanley E. Nyberg". The signature is fluid and cursive, with the first name "Stanley" being the most prominent.

Stanley E. Nyberg, Ph.D.  
Registrar



## **ACKNOWLEDGEMENTS**

This publication of the 2002 ANNUAL REPORT OF VITAL STATISTICS is the result of the combined efforts of all data providers, including the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel. We gratefully acknowledge the assistance provided by all data providers, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the 2002 ANNUAL REPORT OF VITAL STATISTICS include:

Jane Purtill, Director, Statistics Unit: supervision of data collection, coding and editing.

Sharon Pagnano and Paul Budrow: coordination of the hospital query program for birth certificate data, specialized data programming, and assistance in developing specialized table production; technical assistance from Maureen McKean (Statistics Unit), Robert Coffin (Nosologist), and Ann-Marie Neault (Nosologist); and Division of Data Processing: data file management and vital events series printouts.

Isabel Caceres, Bruce Cohen, Malena Hood, and James West, Bureau of Health Information, Statistics, Research, and Evaluation: provided technical assistance and data, including the previously published:

Massachusetts Births 2002: Figures B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11 and D-3; as well as, Tables B-1, B-2A, B-2B, B-3A, B-3B, B-4, B-5a, B-5b, B-8, B-9, B-10, B-11A, B-11B, B-12, B-13, B-13A, B-14A, B-14B, B-14C, and D-2.

Massachusetts Deaths 2002: Figures C-1, C-2, C-3, C-4, and F-4; as well as, Tables C-1, C-2, C-3, C-4A, C-4B, C-5, C-6A, C-6B, C-7, C-8, and C-9, C-10, C-11A, C-11B, C-11C, C-11D, C-12A, C-12B, C-12C, C-12D, C-13, C-15A, C-15B, C-15C, D-1, D-3, and D-4.

The joint efforts of all the staff of the Registry of Vital Records and Statistics are necessary to produce the data contained in this publication. Special acknowledgement is made to the following Registry supervisors:

Howard Wong, Director of Systems and Development, who is responsible for all the computer-based systems in the Registry office;

Pedro Fidalgo, Operations Unit Supervisor, who is responsible for all printing and mailing of forms;

Pauline McNulty, Registration Unit Director, who is responsible for coordination with cities and towns, funeral directors, courts and the overall registration and amendment process;

June Deloney, Registration Unit Supervisor, who is responsible for coordinating timely and accurate document processing.

The 2002 ANNUAL REPORT OF VITAL STATISTICS has been compiled and produced under the general supervision and direction of:

**Stanley E. Nyberg, PhD., State Registrar  
Registry of Vital Records and Statistics**

**Karin A. Barrett, Assistant State Registrar  
Registry of Vital Records and Statistics**

**Charlene J. Zion, Information Officer  
Registry of Vital Records and Statistics  
Editor**

**Kevin Y. Foster, Epidemiologist  
Registry of Vital Records and Statistics  
Editor**

Massachusetts Department of Public Health publications and materials can be accessed on the Internet.

World Wide Web: Go to, <http://www.mass.gov/dph/rvrs>, and look under publications.

## CONTENTS

TRANSMITTAL LETTER

ACKNOWLEDGMENTS

TABLE OF CONTENTS

INTRODUCTION

SECTION A--VITAL EVENTS		1
Table A-1	Selected Facts in Vital Statistics, Massachusetts: 2002	5
Figure A-1	2002 Massachusetts Daily Vital Events	6
Table A-2	Number and Crude Rates of Vital Events, Massachusetts and United States: 2001-2002	7
Figure A-2A	Births and Deaths in Massachusetts, Selected Years: 1910-2002	8
Figure A-2B	Rates of Natural Increase in Massachusetts and the United States, Selected Years: 1910-2002	8
Table A-3	Massachusetts Resident Births and Deaths with Resultant Natural Increase, Selected Years: 1900-2002	9
Table A-4	Vital Events by Month, Massachusetts Residents: 2002	10
Table A-4A	Vital Events by Community: 2002	11
Table A-4B	Vital Events by County: 2002	22
SECTION B--BIRTHS		23
Figure B-1	Daily Birth Statistics, Massachusetts: 2002	34
Table B-1	Trends in Birth Characteristics, Massachusetts: 1980, 1985, 1990-2002	35
Table B-2A	Birth Characteristics by Maternal Race, Hispanic Ethnicity, and Birthplace, Massachusetts: 2002	36
Table B-2B	Birth Characteristics by Maternal Ancestries, Massachusetts: 2002	37
Figure B-2	Resident Live Births by Mother's Race/Ethnicity: 2002	38
Figure B-3	Resident Live Births by Mother's Age: 2002	39

**SECTION B--BIRTHS (continued)**

Table B-3A	Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2002	40
Table B-3B	Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 2002	42
Table B-4	Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 2002	44
Figure B-4	Trends in the Number of Births by Mother's Age Group, Massachusetts: 1980-2002	45
Figure B-5	Percent of Mothers Breastfeeding or Intending to Breastfeed by Age Group, Massachusetts: 2002	46
Figure B-6	Percent of Mothers who Smoked during Pregnancy by Mother's Race/Hispanic Ethnicity and Educational Attainment, Massachusetts: 2002	47
Figure B-7	Distribution of Smoking Status during Pregnancy by Smoking Status prior to Pregnancy, Massachusetts: 2002	48
Table B-5A	Parity by Age of Mother, Massachusetts: 2002	49
Table B-5B	Trends in Number and Percent Distribution of Births by Plurality and Age, Massachusetts: 1990-2002	50
Table B-6	Resident Births by Mother's Age, Marital Status and Race/Hispanic Ethnicity, Massachusetts: 2002	51
Table B-7	Resident Births to Teenage Mothers: 1970-2002	52
Table B-8	Births by Birthweight, Race and Hispanic Ethnicity, Massachusetts: 2002	53
Figure B-8	Low Birthweight among Smoking and Nonsmoking Mothers, by Race and Hispanic Ethnicity, Massachusetts: 2002	54
Table B-9	Low Birthweight by Maternal Age, Race and Hispanic Ethnicity, Massachusetts: 2002	55
Table B-10	Births by Gestational Age, Race and Hispanic Ethnicity, Massachusetts: 2002	56
Figure B-9	Trends in Adequacy of Prenatal Care by Race and Hispanic Ethnicity, Massachusetts: 1996-2002	57
Table B-11A	Adequacy of Prenatal Care by Selected Characteristics, Massachusetts: 2002	58
Table B-11B	Adequacy of Prenatal Care Initiation by Selected Characteristics, Massachusetts: 2002	59
Table B-11C	Adequacy of Prenatal Care Visits by Selected Population Characteristics, Massachusetts: 2002	60



## SECTION B--BIRTHS (continued)

Figure B-10	Adequacy of Prenatal Care for Selected Population Characteristics, Massachusetts: 2002	61
Figure B-11	Distribution of Prenatal Care Payment Source, Massachusetts: 2002	62
Table B-12	Birth Characteristics by Source of Prenatal Care Payment, Race, and Hispanic Ethnicity, Massachusetts: 2002	63
Table B-13	Birth Characteristics by Licensed Maternity Facility, Massachusetts: 2002	65
Table B-13A	Caesarean Section Deliveries and Vaginal Births after Caesarean Section (VBACs) by Licensed Maternity Facility, All Births, Massachusetts: 2002	67
Table B-14A	Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002	69
Table B-14B	Birth Characteristics: Occurrence and Resident Births and Infant Deaths by County, Massachusetts: 2002	77
Table B-14C	Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Community Health Network Areas (CHNAs): 2002	78
SECTION C--DEATHS		79
Figure C-1	Daily Death Statistics, Massachusetts: 2002	88
Table C-1	Trends in Mortality Characteristics, Massachusetts: 1992-2002	89
Figure C-2	Expected Years of Life Remaining at Different Ages by Race/Hispanic Ethnicity, Massachusetts: 2002	90
Table C-2	Years of Life Remaining, Massachusetts: 2002	90
Table C-3	Five Leading Causes of Death Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts and United States: 1992-2002	91
Table C-4A	Leading Causes of Death, Numbers and Age-Specific Rates by Gender, Massachusetts: 2002	93
Table C-4B	Leading Causes of Death, Numbers and Age-Specific Rates (Ages 65 and older) by Gender, Massachusetts: 2002	94
Figure C-3	Trends in Deaths from Selected Causes, Massachusetts: 1842-2002	95

**SECTION C--DEATHS (continued)**

<b>Table C-5</b>	<b>Leading Causes of Death and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 2002</b>	<b>96</b>
<b>Figure C-4</b>	<b>Percent Distribution of Leading Causes of Death, Massachusetts: 2002</b>	<b>97</b>
<b>Table C-6A</b>	<b>Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2002</b>	<b>98</b>
<b>Table C-6B</b>	<b>Number and Age-Specific Rates for Selected Causes of Death, Persons age 65+ by Race and Hispanic Ethnicity, Massachusetts: 2002</b>	<b>99</b>
<b>Table C-7</b>	<b>Heart Disease and Cancer Deaths by Race and Gender, Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts: 1996-2002</b>	<b>100</b>
<b>Table C-8</b>	<b>Number and Age-Adjusted Rates of Cancer Deaths by Selected Types and Gender, Massachusetts: 2002</b>	<b>102</b>
<b>Table C-9</b>	<b>Selected Causes of Cancer Deaths by Age, Massachusetts: 2002</b>	<b>103</b>
<b>Table C-10</b>	<b>Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race and Hispanic Ethnicity, Massachusetts: 2002</b>	<b>104</b>
<b>Table C-11A</b>	<b>Injury Deaths by Leading Causes, Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2002</b>	<b>105</b>
<b>Table C-11B</b>	<b>Intentional Injury Deaths by Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age Specific Rates, Massachusetts: 2002</b>	<b>107</b>
<b>Table C-11C</b>	<b>Injury Deaths by Intent, Method, and Gender: Number and Age-Adjusted Rates, Massachusetts: 2002</b>	<b>109</b>
<b>Table C-11D</b>	<b>Type of Injury Deaths by Method / Intent Categories: Numbers and Age-Adjusted Rates, Massachusetts: 2002</b>	<b>110</b>
<b>Table C-12A</b>	<b>HIV/AIDS Deaths by Place of Occurrence, Massachusetts: 1989-2002</b>	<b>111</b>
<b>Table C-12B</b>	<b>HIV/AIDS Deaths by Age, Massachusetts: 1989-2002</b>	<b>112</b>

**SECTION C--DEATHS (continued)**

Table C-12C	HIV/AIDS Deaths by Gender and Race and Hispanic Ethnicity, Massachusetts: 1989-2002	113
Table C-12D	HIV/AIDS Deaths by Gender, Race, and Hispanic Ethnicity Numbers, Percent, and Age-Adjusted Rates, Massachusetts: 1999-2002	114
Table C-13	HIV/AIDS Deaths by Race, Hispanic Ethnicity, and Gender: Persons Ages 25-44, Massachusetts: 1991-2002	115
Table C-14A	Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence: 2002	116
Figure C-5	Proportion of Deaths Certified by Medical Examiner for Selected Causes of Death, Massachusetts Occurrence Deaths: 2002	119
Table C-14B	Medical Examiner Certified Deaths by County, Massachusetts Occurrence: 2002	120
Table C-15A	Selected Causes of Death by Community, 2002	121
Table C-15B	Selected Causes of Death by Community Health Network Area (CHNA), Massachusetts: 2002	131
Table C-15C	Selected Causes of Death by County, Massachusetts: 2002	132
Table C-16	Resident Deaths by Cause, Sex, and Race, 2002	133

**SECTION D--INFANT & NEONATAL DEATHS** 153

Figure D-1	Infant Mortality Rates by Race, Massachusetts: 1980-2002	156
Figure D-2	Neonatal Mortality Rates by Race, Massachusetts: 1980-2002	157
Table D-1	Trends in Infant, Neonatal, and Post-Neonatal Mortality by Race and Hispanic Ethnicity, Massachusetts: 1992-2002	158
Table D-2	Trends in Infant, Neonatal, and Post-Neonatal Mortality by Race, Massachusetts: 1980-2002	159
Table D-3	Infant, Neonatal, and Post-Neonatal Deaths by Cause, Massachusetts: 2002	162
Table D-4	Infant Deaths by Major Causes, Race and Hispanic Ethnicity, Massachusetts: 2002	163
Figure D-3	Infant Mortality Rates, Massachusetts: 1842-2002	164

<b>SECTION E--MARRIAGES &amp; DIVORCES</b>	<b>165</b>
Figure E-1	Rates of Marriages and Divorces per 1,000 Population, Selected Years, Massachusetts: 1900-2002 166
Table E-1	Marriages and Divorces by County, Massachusetts Occurrence: 2002 167
Table E-2	Marriages and Divorces and Rates per 1,000 Population, Massachusetts Occurrence, Selected Years: 1900-2002 168
Table E-3	Marriages by Age and Marital Status, Massachusetts Occurrence: 2002 169
Table E-4	Number of Marriages by Age of Bride and Age of Groom, Massachusetts Occurrence: 2002 170
Table E-5	Number of Marriages for Bride by Number of Marriages for Groom, Massachusetts Occurrence: 2002 170
<b>SECTION F--POPULATION</b>	<b>171</b>
Figure F-1	Massachusetts Population: 1900-2002 172
Table F-1	Population Estimates by Race, Ethnicity, Age, and Sex, Massachusetts: 2002 173
Figure F-2	Population by Age Group, Massachusetts: 2002 175
Figure F-3	Population by Race, Massachusetts: 2002 176
Figure F-4	Changes in Age Composition of the Population, Massachusetts: 1900-2000 177
Table F-2	Massachusetts Population by County: 1930-2000 178
Table F-3	Massachusetts Population by City and Town: 1980, 1990 and 2000 US Census 179
Table F-4	Population Counts and Estimates, Massachusetts: 1980, 1985-2002 183
<b>APPENDICES</b>	<b>191</b>

# I

## Source Documents

Standard Certificate of Live Birth	191
Standard Certificate of Death	192
Report of Fetal Death	193
Certificate of Marriage	194
Certificate of Absolute Divorce or Annulment	195





## INTRODUCTION

The ANNUAL REPORT OF VITAL STATISTICS (Public Document No. 1) has been published continuously since 1842. This is the 39th edition produced by the Department of Public Health. This report, required under the provisions of Chapter 111, section 2, of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 2002. The report provides its users with an overview of the health status of the Massachusetts population. The report can be accessed at <http://www.mass.gov/dph>.

Vital statistics data may be tabulated either in terms of resident data or occurrence data. Resident data include all events which occur to residents of the Commonwealth, wherever the events occur. Occurrence data include all those events which occur within the state, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth and death records among the fifty states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events which occur in states and provinces other than where the individual resides. This exchange allows each of the states and provinces to track the births and deaths of their residents. The majority of the data presented in this report for births and deaths is based on resident data. Marriage, divorce, and fetal death data, however, only reflect events that occurred within the Commonwealth.

## REGISTRATION

The first government-operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries with a vital registration system such as England, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1842, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and town be sent to the Secretary of State. The first year of collection was designated for 1841. The collection of data and the production of the ANNUAL REPORT OF VITAL STATISTICS has continued since then. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open records. For open birth and death records, there is a triple registration process in Massachusetts. The event is first recorded in the city or town where the event occurred. Beginning in 2000, the clerk of that community was then required to forward the original record to the State Registry, and a certified copy to the community where the person resided at the time of the event. Certified copies of the records may be issued from local or state records. If the record is a restricted birth record, such as those of out-of-wedlock births, the registration occurs only in the community where the event occurred and in the state office unless the mother gives permission for the resident community to receive a copy. In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives information about the birth record directly from the hospital or birthing center where the birth occurred. These data include confidential medical information in addition to the legal

information. This medical information is processed to produce the statistical information on births contained in this report.

Since 1986, the State Registry has developed a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called the Electronic Birth Certificate (EBC). Most birth records are now received through this method. EBC has contributed to reducing processing time at both the hospital and the State Registry, while the system's built-in edits increase the quality of the data.

The process for creating death certificates is the most complex of all vital records. Complete and accurate death records are dependent upon the following individuals: 1.) Certifier, who not only initiates the death registration process but also determines the cause of death as well as the place, time, and date of death; 2.) Funeral Director, who plays the role of facilitator in the death registration process and adds the personal data concerning the decedent, which are supplied by an Informant; 3.) Burial Agent, who both issues the permit that allows the chosen disposition to take place and serves as the initial acceptor of the death certificate for official registration; and 4.) City or Town Clerk, who records the death certificate, issues certified copies and forwards the original death record to the Registry of Vital Records and Statistics and other communities as required by law.

Beginning in 1999, the ICD-10 (International Classification of Diseases-Tenth Revision) replaced the ninth revision as a means of classifying cause of death. The ICD-10, developed by the World Health Organization, is an international classification system employed by the United States in order to promote international comparability in collecting, classifying, and tabulating mortality statistics.

The Registry of Vital Records and Statistics receives, directly from hospitals or physicians, fetal death reports for fetuses of either twenty or more weeks gestation or weighing at least 350 grams. There are no local filings of fetal death reports.

Marriage licenses may be issued from any of the 351 cities or towns regardless of where the marriage is to take place. The community issuing the license is required to submit an attested copy of the marriage record to the State Registry. For the 2002 marriage records, the event is recorded only in the community where the notice of intention to marry was filed and at the State Registry.

Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.

### **STATISTICAL PROCESSING AND TABULATING**

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, errors and inconsistencies are queried and corrected. A computerized hospital query program is part of the EBC program. The Registry also has a data quality assurance program that includes on-site instruction for clerks and hospital personnel who have reporting difficulties, and training for all groups involved in the data collection process.



Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report and in special studies, and for program monitoring and surveillance.

Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Tenth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as to educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

Massachusetts Department of Public Health  
Registry of Vital Records and Statistics  
150 Mount Vernon Street  
Dorchester, Massachusetts 02125-3105  
(617) 740-2670



## VITAL EVENTS



## **SECTION A**

### **VITAL EVENTS**

#### **HIGHLIGHTS**

##### **BIRTHS**

- In 2002, there were 80,624 births to Massachusetts residents.
- Births decreased by 0.5% from 2001 to 2002.
- The 2002 Massachusetts birth rate per 1,000 residents was 12.5, a decrease of 0.8% from the birth rate of 12.6 in 2001.
- Massachusetts' 2002 birth rate of 12.5 per 1,000 residents was below the 2002 US rate of 13.9.
- The most births occurred in August (9.0%--7,246 births); the fewest births occurred in February (7.5%--6,028 births).

##### **DEATHS**

- In 2002, 56,881 Massachusetts residents died.
- The number of resident deaths increased by 0.3% from 2001 to 2002.
- The Massachusetts crude death rate decreased from 885.5 deaths per 100,000 residents in 2001 to 884.7 in 2002. The 2002 US crude death rate of 847.3 deaths per 100,000 residents was slightly lower than the 2001 US crude death rate of 848.5. The 2002 age-adjusted death rate in Massachusetts (819.9 per 1,000 residents) was lower than the US age-adjusted death rate (845.3).
- The most deaths in 2002 occurred in January (9.3%--5,305); the fewest deaths occurred in June (7.5%--4,275).

##### **FETAL DEATHS**

- There were 376 reportable fetal deaths to Massachusetts residents in 2002.
- The number of reportable fetal deaths decreased by 13 from 2001 to 2002, resulting in a fetal death rate of 4.7 per 1,000 live births.

## INFANT DEATHS

- In 2002, 397 infant deaths (less than 1 year of age) occurred to Massachusetts residents.
- The 2002 Massachusetts infant mortality rate of 4.9 deaths per 1,000 live births was a slight decrease from the 2001 infant mortality rate of 5.0 deaths per 1,000 live births.
- The Black non-Hispanic infant mortality rate decreased from 12.1 in 2001 to 11.6 in 2002.
- The Massachusetts 2002 infant mortality rate of 4.9 per 1,000 live births was 30% below the US rate of 7.0.

## MARRIAGES

- In 2002, there were 37,735 marriages in Massachusetts.
- The number of marriages in Massachusetts decreased by 5.8% from 2001 to 2002.
- The 2002 Massachusetts rate of 5.9 marriages per 1,000 population was below the US rate of 7.8.
- The most marriages occurred in June (13.7%--5,169); the fewest marriages occurred in January (3.3%--1,262).

## DIVORCES

- In 2002, 16,253 divorces were granted in Massachusetts.
- Divorces in Massachusetts increased by 6.0% from 2001 to 2002.
- The 2002 Massachusetts divorce rate of 2.5 divorces per 1,000 population was below the US rate of 3.8.
- The largest number of divorces were finalized in September (1,518--9.3%), and the fewest in November (1,069—6.6%).

## NATURAL INCREASE

- The rate of natural increase in the Massachusetts resident population decreased from 3.8 in 2001 to 3.7 in 2002.
- The 2002 US natural increase rate of 5.4 remains above that of Massachusetts.

The Vital Events section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town and county. More detailed information is contained in the sections on the individual events.

#### **DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:**

##### **LIVE BIRTH**

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

##### **FETAL DEATH**

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or weighing at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

##### **INFANT DEATH**

Death of a child whose age is less than one year (365 days).

##### **MISER**

The Massachusetts Institute for Social and Economic Research. This research institute, which was located at the University of Massachusetts in Amherst, produced the official population estimates and projections for the Commonwealth before 1999.

##### **NATURAL INCREASE**

The difference between the number of resident live births and the number of resident deaths.

##### **NEONATAL DEATH**

Death of a child whose age is less than 28 days.

## OCCURRENCE

Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place of occurrence will be one of 351 cities or towns.

## RESIDENCE

The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred in Massachusetts.

### CRUDE RATES OF VITAL EVENTS:

BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
FETAL MORTALITY RATE	$\frac{\text{Number of Resident Fetal Deaths}}{\text{Resident Live Births} + \text{Resident Fetal Deaths}} \times 1,000$
INFANT MORTALITY RATE	$\frac{\text{No. of Resident Deaths <1 Year}}{\text{Resident Live Births}} \times 1,000$
NEONATAL MORTALITY RATE	$\frac{\text{No. of Resident Deaths <28 Days}}{\text{Resident Live Births}} \times 1,000$
DEATH RATE	$\frac{\text{No. of Resident Deaths}}{\text{Total Resident Population}} \times 100,000$
MARRIAGE RATE	$\frac{\text{No. of Occurrence Marriages}}{\text{Total Resident Population}} \times 1,000$
DIVORCE RATE	$\frac{\text{No. of Occurrence Divorces}}{\text{Total Resident Population}} \times 1,000$



**Table A-1  
SELECTED FACTS IN VITAL STATISTICS  
MASSACHUSETTS: 2002**

**BIRTH**

Age Range of Fathers: 13-83

Age Range of Mothers: 13-58

Sets of Twins: 1,854

Sets of Triplets: 80

Sets of Quadruplets: 1

Most Births Occurred on: July 18, 2002 (296 births)

Fewest Births Occurred on: December 8, 2002 (124 births)

Highest # of Births at: Brigham and Women's Hospital (9,859)

Lowest # of Births at: Nantucket Cottage Hospital (85 births)

**Twenty Most Popular Names for Boys**

**Twenty Most Popular Names for Girls**

<i>Boys' Names</i>	<i>Number</i>	<i>Boys' Names</i>	<i>Number</i>
Matthew	864	Anthony	521
Michael	849	Christopher	521
Nicholas	733	Joshua	471
Ryan	691	Alexander	466
John	645	Benjamin	446
Jacob	630	Zachary	442
Joseph	622	Thomas	424
Andrew	611	Samual	420
William	562	Jack	418
Daniel	525	Tyler	415

<i>Girls' Names</i>	<i>Number</i>	<i>Girls' Names</i>	<i>Number</i>
Emily	664	Samantha	359
Olivia	584	Elizabeth	348
Emma	514	Ashley	320
Sarah	467	Sophia	317
Abigail	452	Jessica	295
Madison	413	Lauren	294
Julia	407	Katherine	269
Hannah	400	Victoria	269
Grace	387	Caroline	248
Isabella	368	Anna	239

**DEATH**

Male Decedents 100 Years and Older: 84

Female Decedents 100 Years and Older: 509

Most Deaths Occurred on: February 16, 2002 (215)

Fewest Deaths Occurred on: August 29 & August 8, 2002 (112)

Month Most Suicides Occurred: October (51)

Month Most Homicides Occurred: June (25)

Month Most Motor Vehicle Deaths Occurred: May & September (59)

**MARRIAGE**

Ages of Grooms: 15-95 years (average: 34.2)

Ages of Brides: 14-93 years (average: 31.8)

Age of First Time Grooms: 15-89 years (average: 30.2)

Age of First Time Brides: 14-82 (average: 28.5)

Most Popular Month for Marriages: June (5,169)

Least Popular Month for Marriages: January (1,262)

Most Marriages Occurred on: September 14, 2002 (806)

Fewest Marriages Occurred on: January 21, 2002 (6)

Greatest Age Difference When Groom Older than Bride: 52 years

Greatest Age Difference When Bride Older than Groom: 46 years

**DIVORCE**

Length of Marriages Involved in Divorces: < 1 Year to 60 Years of Marriage

Most Common Length of Marriage Prior to Divorce: 5 years

Month Most Divorces Granted: September (1,518)

Month Fewest Divorces Granted: November (1,079)

Figure A-1

## 2002 Massachusetts Daily Vital Events

Each day in 2002, Massachusetts residents had approximately:

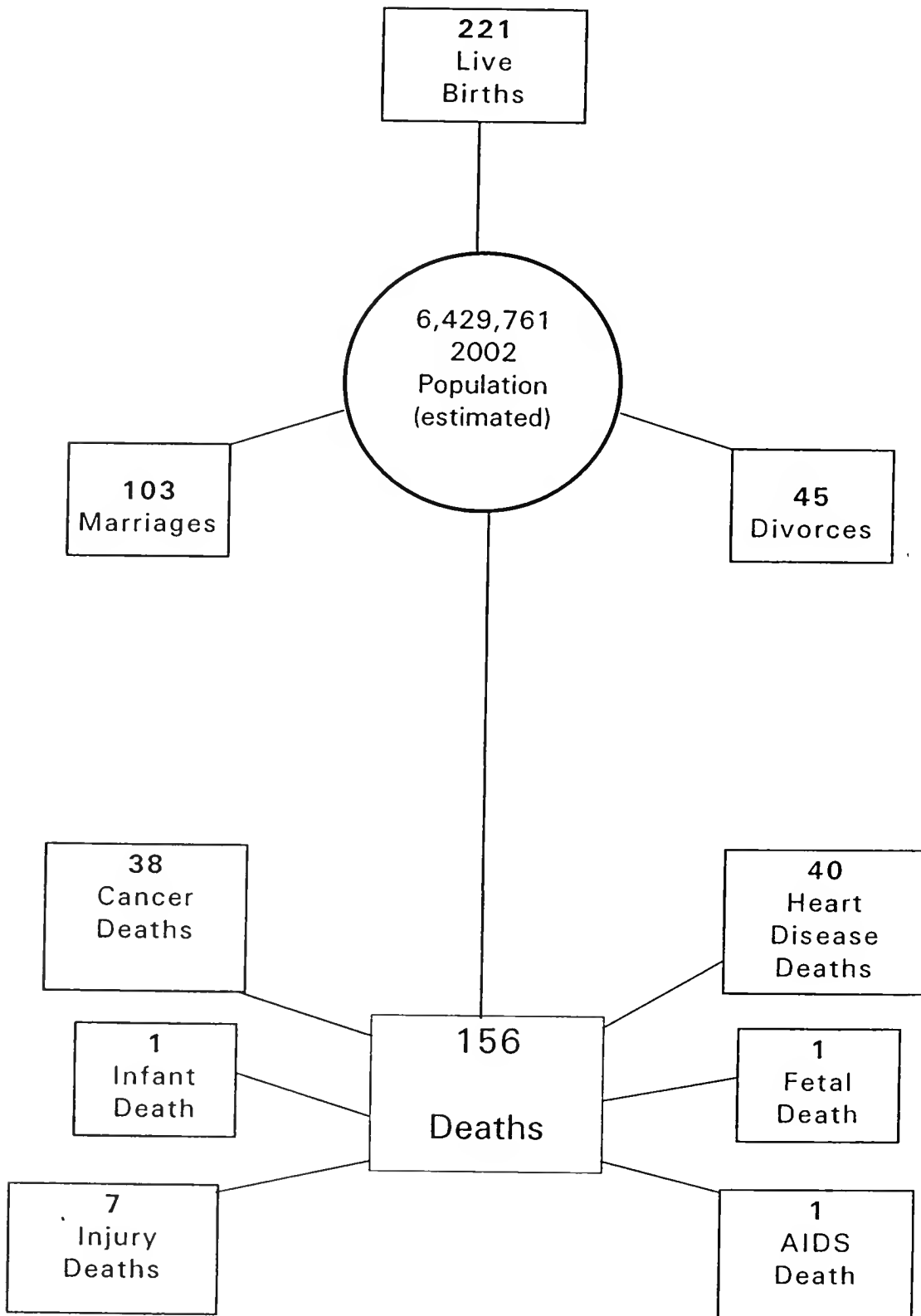


Table A-2. Number and Crude Rates of Vital Events, Massachusetts and United States: 2001-2002

Vital Event	<u>Massachusetts</u>				<u>United States<sup>4</sup></u>			
	2002 Number	Rate <sup>3</sup>	2001 Number	% of Rate Change	2002 Number	Rate <sup>3</sup>	2001 Number	% of Rate Change
Births	80,624	12.5	81,014	-0.8	4,022,000	13.9	4,025,933	-1.4
Fetal Deaths <sup>1</sup>	376	4.7	389	-2.1	25,741	6.4	26,571	-3.0
Total Deaths <sup>1</sup>	56,881	884.7	56,733	-0.1	2,443,387	847.3	2,416,425	-0.1
Infant Deaths <sup>1</sup>	397	4.9	407	-2.0%	28,154	7	27,376	2.9
Neonatal Deaths <sup>1</sup>	299	3.7	308	-2.60%	18,903	4.7	18,117	4.4
Marriages <sup>2</sup>	37,735	5.9	40,048	-6.3	2,256,000	7.8	2,345,000	-4.9
Divorces <sup>2</sup>	16,253	2.5	15,324	4.2	1,095,802	3.8	1,139,188	-5.0

1. Neonatal and infant deaths are included in total deaths; neonatal deaths are included in infant deaths; fetal deaths are excluded from total deaths.

2. Figures for marriages and divorces reflect occurrence, not residence.

3. The rates for live births, marriages and divorces are per 1,000 population; rates for total deaths are per 1,000 population. Rates for infants and neonatal deaths are per 1,000 live births.

Rates for fetal deaths are per 1,000 live births and fetal deaths.

4. National numbers and rates provided by the National Center for Health Statistics.

Figure A-2A. Births and Deaths in Massachusetts, Selected Years: 1910-2002

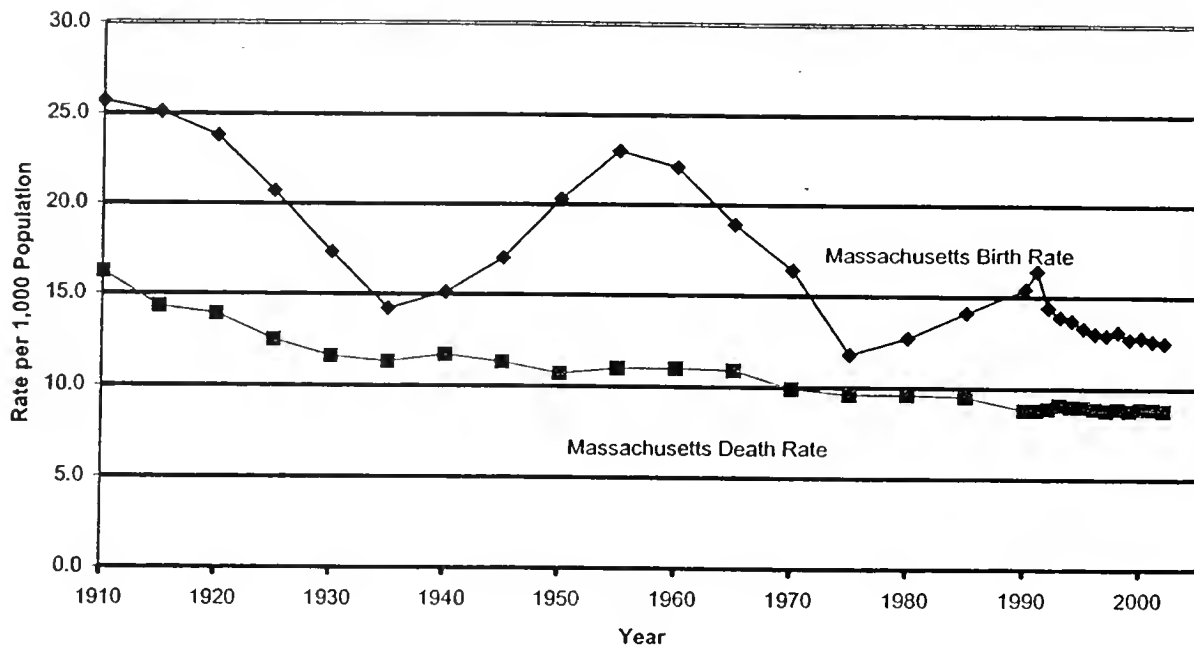
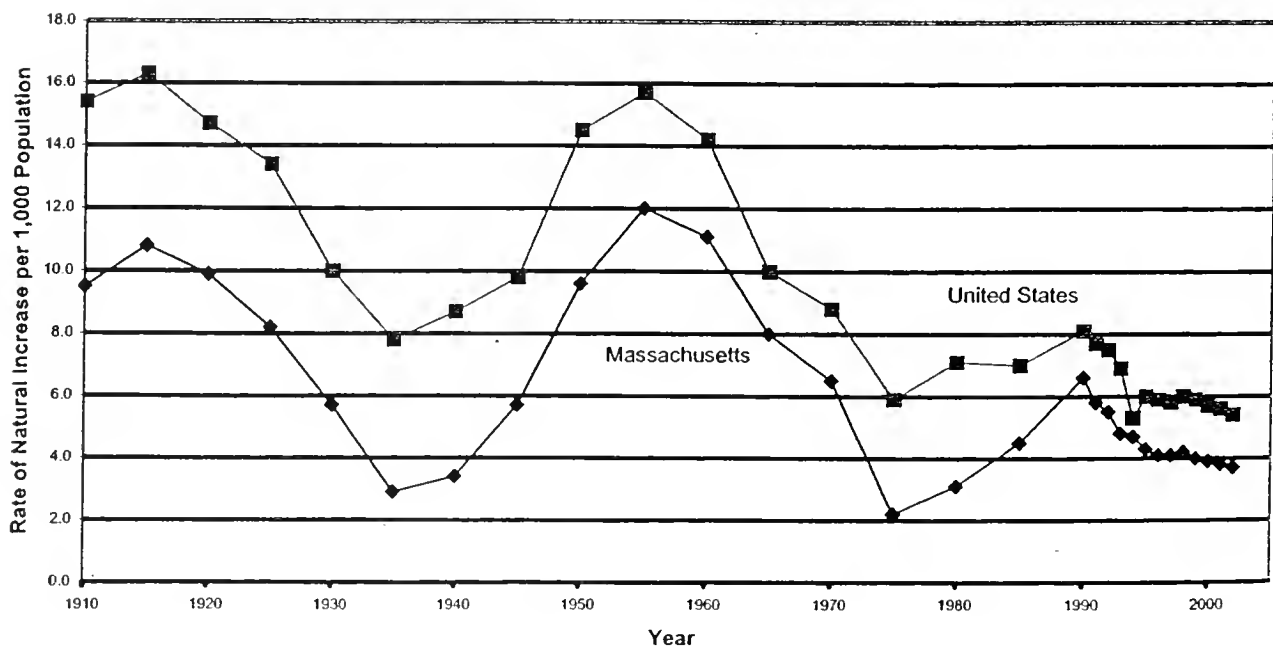


Figure A-2B. Rates of Natural Increase in Massachusetts and the United States, Selected Years: 1910-2002



**Table A-3. Massachusetts Resident Births and Deaths with Resultant Natural Increase****Selected Years: 1900-2002**

<b>Year</b>	<b>Births</b>	<b>Deaths</b>	<b>Natural Increase</b>	<b>Rate/1,000 Residents</b>
1900	73,386	51,156	22,230	7.9
1905	75,022	50,486	24,536	8.2
1910	86,539	54,407	32,132	9.5
1915	93,155	53,131	40,024	10.8
1920	91,859	53,632	38,227	9.9
1925	86,014	51,890	34,124	8.2
1930	73,690	49,503	24,187	5.7
1935	62,416	49,634	12,782	2.9
1940	65,369	50,698	14,671	3.4
1945	76,455	50,763	25,692	5.7
1950	95,619	50,359	45,260	9.6
1955	109,610	53,386	56,224	11.6
1960	114,018	56,560	57,458	11.2
1965	100,262	58,853	41,409	7.8
1970	93,582	56,944	36,638	6.4
1975	68,070	53,708	14,362	2.5
1980	72,591	54,934	17,657	3.1
1981	73,930	52,813	21,117	3.7
1982	75,749	52,867	22,882	4.0
1983	76,031	54,150	21,881	3.8
1984	78,197	55,189	23,008	4.0
1985	81,781	55,597	26,184	4.5
1986	82,168	55,860	26,308	4.5
1987	84,345	55,562	28,783	4.9
1988	88,047	56,407	31,640	5.4
1989	91,314	53,748	37,566	6.4
1990	92,461	53,008	39,453	6.6
1991	88,176	53,010	35,166	5.8
1992	87,202	53,804	33,398	5.5
1993	84,627	55,557	29,070	4.8
1994	83,758	54,914	28,844	4.7
1995	81,562	55,296	26,266	4.3
1996	80,164	55,187	24,977	4.0
1997	80,321	54,634	25,687	4.1
1998	81,406	55,204	26,202	4.2
1999	80,866	55,763	25,103	4.0
2000	81,582	56,591	24,991	3.9
2001	81,104	56,733	24,371	3.8
2002	80,624	56,881	23,743	3.7

**Table A-4. Vital Events by Month, Massachusetts Residents: 2002**

		<b>Births</b>	<b>Fetal Deaths<sup>1</sup></b>	<b>Deaths</b>	<b>Infant Deaths<sup>2</sup></b>	<b>Neonatal Deaths<sup>2</sup></b>	<b>Marriages</b>	<b>Divorces</b>
<b>Totals</b>		<b>80,624</b>	376	56,881	397	299	37,735	16,253
<b>January</b>	#	6,393	37	5,305	47	37	1,262	1,440
	Rank	9	3	1	1	1	12	4
<b>February</b>	#	6,028	27	5,199	34	26	1,653	1,245
	Rank	12	10	2	7	4	10	11
<b>March</b>	#	6,737	39	5,189	35	26	1,619	1,313
	Rank	7	1	3	5	4	11	9
<b>April</b>	#	6,734	29	4,598	29	24	2,348	1,408
	Rank	8	7	7	8	6	8	5
<b>May</b>	#	7,162	22	4,597	22	19	3,544	1,483
	Rank	3	12	8	11	10	6	2
<b>June</b>	#	6,954	32	4,275	45	33	5,169	1,253
	Rank	5	6	12	2	2	1	10
<b>July</b>	#	7,229	38	4,544	23	18	3,663	1,357
	Rank	2	2	9	9	11	5	7
<b>August</b>	#	7,246	28	4,365	40	32	4,798	1,377
	Rank	1	9	11	3	3	3	6
<b>September</b>	#	6,985	37	4,401	35	24	4,922	1,518
	Rank	4	3	10	5	6	2	1
<b>October</b>	#	6,774	33	4,661	32	23	4,444	1,465
	Rank	6	5	6	9	8	4	3
<b>November</b>	#	6,051	24	4,686	19	16	2,481	1,079
	Rank	11	11	5	12	12	7	12
<b>December</b>	#	6,331	29	5,061	36	21	1,832	1,315
	Rank	10	7	4	4	9	9	8

<sup>1</sup>Fetal deaths are not included in Births or Deaths. <sup>2</sup>Infant deaths and neonatal deaths are included in total resident deaths; neonatal deaths are included in infant deaths.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL :	LICENSES : OCCURRENCE :	ISSUED :	
						(2)	(3)	(4)		
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
ABINGTON	15,211	0	177	85	143	0	0	79	92	34
ACTON	20,695	1	244	80	102	0	0	99	44	142
ACUSHNET	10,453	0	98	19	84	1	0	55	50	14
ADAMS	8,625	0	86	24	119	0	0	64	55	-33
AGAWAM	28,381	0	238	417	322	0	0	185	164	-84
ALFORD	394	0	3	2	5	1	1	1	2	-2
AMESBURY	16,702	0	239	102	150	1	1	78	49	89
AMHERST	34,658	5	192	76	120	2	0	126	107	72
ANDOVER	32,457	1	349	178	247	0	0	163	219	102
AQUINNAH	345	0	3	0	2	0	0	2	28	1
ARLINGTON	41,963	1	545	119	419	1	1	261	152	126
ASHBURNHAM	5,741	0	61	10	28	0	0	21	27	33
ASHEY	2,890	0	24	5	14	0	0	10	10	10
ASHFIELD	1,810	0	11	4	7	0	0	7	7	4
ASHLAND	15,262	1	288	18	73	0	0	69	64	215
ATHOL	11,463	0	118	152	144	0	0	56	38	-26
ATTLEBORO	43,109	1,131	641	532	384	1	1	291	214	257
AUBURN	16,245	0	154	92	168	1	1	81	110	-14
AVON	4,430	0	42	10	48	1	1	30	25	-6
AYER	7,270	0	105	148	53	0	0	40	31	52
BARNSTABLE	48,626	1,023	442	992	532	3	1	408	494	-90
BARRE	5,286	0	66	12	37	0	0	27	70	29
BECKET	1,744	0	22	10	18	1	1	14	14	4
BEDFORD	12,538	0	148	170	110	1	1	75	78	38
BELCHERTOWN	13,369	2	178	25	72	0	0	46	50	106
BELLINGHAM	15,519	2	255	32	102	1	1	96	81	153
BELMONT	23,964	0	270	105	222	1	0	120	160	48
BERKLEY	6,130	0	88	10	30	1	1	22	16	58
BERLIN	2,564	0	28	10	23	1	1	8	9	5
BERNARDSTON	2,178	0	22	7	26	0	0	8	21	-4
BEVERLY	40,254	2,412	451	663	419	0	0	214	225	32
BILLERICA	39,278	3	553	139	235	1	0	186	132	318

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT	OCCURRENCE :	RESIDENT	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	OCCURRENCE (3) :	
STATE TOTAL	16,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
BLACKSTONE	9,003	0	124	17	49	0	0	50	25	75
BLANDFORD	1,235	0	11	2	7	0	0	3	3	4
BOLTON	4,268	0	72	5	21	0	0	15	31	51
BOSTON	585,410	23,337	8,011	8,011	4,417	56	41	3,779	3,787	3,594
BOURNE	19,272	1	252	120	204	0	0	81	115	48
BOXBOROUGH	4,911	0	59	1	10	0	0	10	24	49
BOXFORD	8,180	0	87	18	31	0	0	19	13	56
BOYLSTON	4,106	1	55	7	25	0	0	18	49	30
BRAINTREE	33,794	2	437	375	372	2	2	180	133	65
BREWSTER	10,327	0	63	164	154	0	0	54	140	-91
BRIDGEWATER	25,507	1	266	53	157	1	1	117	79	109
BRIMFIELD	3,482	0	34	10	30	1	1	8	21	4
BROCKTON	98,186	2,221	1,537	1,428	899	9	9	687	541	638
BROOKFIELD	3,104	0	33	9	28	0	0	17	20	5
BROOKLINE	57,157	3	649	213	370	5	5	446	335	279
BUCKLAND	1,986	1	9	3	19	0	0	6	5	-10
BURLINGTON	22,838	2	328	668	143	1	0	122	98	185
CAMBRIDGE	102,466	2,718	1,071	902	584	7	5	878	877	487
CANTON	21,237	0	282	148	233	5	5	115	89	49
CARLISLE	4,820	0	49	6	14	0	0	14	27	35
CARVER	11,366	0	143	26	98	0	0	51	52	45
CHARLEMONT	1,385	1	12	1	10	0	0	4	23	2
CHARLTON	11,856	0	153	40	84	0	0	51	29	69
CHATHAM	6,782	0	35	90	116	0	0	78	189	-81
CHELMSFORD	33,577	3	413	150	289	1	1	155	165	124
CHELSEA	35,048	1	617	262	304	2	0	337	282	313
CHESHIRE	3,373	0	22	5	25	0	0	10	15	-3
CHESTER	1,326	1	14	0	7	0	0	0	1	7
CHESTERFIELD	1,228	1	14	2	10	0	0	6	3	4
CHICOPEE	54,765	0	639	254	635	3	3	287	268	4
CHILMARK	890	0	7	5	4	0	0	15	54	3
CLARKSBURG	1,677	1	14	4	14	0	0	0	1	0

- (1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.
- (2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.
- (3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.
- (4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	OCCURRENCE :	
								(3)	(4)	
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
CLINTON	13,730	4	181	112	158	0	0	75	62	23
COHASSET	7,285	0	88	37	81	0	0	36	142	7
COLRAIN	1,845	0	15	5	13	0	0	4	8	2
CONCORD	16,925	1,298	149	392	190	0	0	82	104	-41
CONWAY	1,866	1	15	0	8	0	0	1	6	7
CUMMINGTON	977	0	9	6	13	0	0	2	4	-4
DALTON	6,778	0	41	52	85	0	0	31	35	-44
DANVERS	25,230	0	233	220	277	0	0	141	287	-44
DARTMOUTH	30,892	0	265	102	287	1	1	124	170	-22
DEDHAM	23,291	1	309	121	238	1	1	276	161	71
DEERFIELD	4,776	0	10	48	35	0	0	28	69	13
DENNIS	16,148	1	136	131	225	1	1	88	132	-89
DIGHTON	6,443	1	61	18	50	0	0	24	32	11
DOUGLAS	7,498	0	128	11	45	3	2	50	26	83
DOVER	5,645	1	67	5	25	0	0	20	18	42
DRACUT	28,660	2	369	63	232	1	1	137	101	137
DUDLEY	10,493	0	126	9	67	0	0	42	33	59
DUNSTABLE	2,978	0	19	4	7	0	0	8	4	12
DUXBURY	14,524	0	174	87	113	0	0	62	81	61
EAST BRIDGEWATER	13,467	0	168	49	112	0	0	73	54	56
EAST BROOKFIELD	2,122	0	16	4	19	0	0	8	18	-3
EAST LONGMEADOW	14,493	0	134	245	188	0	0	91	69	-54
EASTHAM	5,602	0	32	20	76	0	0	32	43	-44
EASTHAMPTON	16,053	0	170	38	151	1	1	87	61	19
EASTON	22,696	0	250	72	147	1	0	77	121	103
EDGARTOWN	3,869	0	48	16	30	0	0	112	183	18
EGREMONT	1,339	0	5	2	8	0	0	5	8	-3
ERVING	1,485	0	11	3	10	0	0	1	5	1
ESSEX	3,331	0	40	4	18	0	0	15	35	22
EVERETT	37,737	0	507	439	378	0	0	332	279	129
FAIRHAVEN	16,359	0	137	149	229	0	0	93	96	-92
FALL RIVER	92,862	1,653	1,190	1,374	1,105	8	8	604	558	85

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT	
		OCCURRENCE :	RESIDENT	OCCURRENCE :	RESIDENT	TOTAL :	NEONATAL	ISSUED :	OCCURRENCE	NATURAL	INCREASE
						(2)	(2)	(3)	(4)		
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743	
FALMOUTH	33,463	637	289	477	387	3	2	240	530	-98	
FITCHBURG	39,944	1	556	294	418	6	4	270	199	138	
FLORIDA	667	0	1	0	1	0	0	0	2	0	
FOXBOROUGH	16,334	0	216	25	96	0	0	75	118	120	
FRAMINGHAM	66,549	2,265	939	693	621	5	3	611	493	318	
FRANKLIN	29,865	1	482	55	146	4	3	137	95	336	
FREETOWN	8,726	1	102	14	48	0	0	45	172	54	
GARDNER	20,991	583	226	308	213	0	0	136	100	13	
GEORGETOWN	7,714	0	110	11	46	0	0	18	24	64	
GILL	1,369	0	13	0	12	0	0	3	10	1	
GLOUCESTER	30,716	0	303	332	312	2	1	209	328	-9	
GOSHEN	941	0	12	3	7	0	0	3	4	5	
GOSNOLD	87	0	0	0	2	0	0	2	6	-2	
GRAFTON	15,702	0	220	36	100	0	0	75	47	120	
GRANBY	6,214	0	51	14	42	0	0	24	19	9	
GRANVILLE	1,572	0	13	1	5	0	0	3	4	8	
GREAT BARRINGTON	7,470	164	64	157	93	1	1	88	53	-29	
GREENFIELD	18,064	452	165	324	219	0	0	155	81	-54	
GROTON	9,962	1	116	21	55	1	0	36	58	61	
GROVELAND	6,222	0	79	12	40	0	0	9	14	39	
HADLEY	4,813	1	30	61	62	1	1	21	42	-32	
HALIFAX	7,686	0	84	17	68	0	0	34	62	16	
HAMILTON	8,421	1	118	13	47	0	0	29	27	71	
HAMPDEN	5,253	0	46	63	38	0	0	17	26	8	
HANCOCK	770	0	9	0	3	0	0	4	11	6	
HANOVER	13,559	0	160	27	76	0	0	69	49	84	
HANSON	9,796	0	122	18	68	0	0	41	63	54	
HARDWICK	2,668	0	25	9	20	1	1	47	21	5	
HARVARD	6,101	0	46	6	47	1	1	11	67	-1	
HARWICH	12,751	1	99	104	176	1	1	78	160	-77	
HATFIELD	3,297	0	25	7	28	0	0	14	14	-3	
HAVERHILL	59,781	1	848	528	553	9	8	280	264	295	

- (1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.
- (2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.
- (3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.
- (4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES: OCCURRENCE ISSUED	(3)	(4)
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
HAWLEY	339	0	0	2	3	0	0	0	5	-3
HEATH	805	0	11	5	6	0	0	0	1	5
HINGHAM	20,172	0	273	130	188	1	1	105	160	85
HINSDALE	1,843	0	20	9	19	0	0	4	3	1
HOLBROOK	10,823	0	117	33	132	0	0	53	39	-15
HOLDEN	16,117	2	156	67	130	0	0	61	59	26
HOLLAND	2,444	0	25	5	15	0	0	6	6	10
HOLLISTON	13,910	0	176	29	89	1	1	55	60	87
HOLYOKE	40,442	562	620	699	514	7	7	236	378	106
HOPEDALE	6,099	0	70	22	58	0	0	15	13	12
HOPKINTON	13,847	1	222	22	55	1	1	51	53	167
HUBBARDSTON	4,139	0	55	8	19	1	0	5	3	36
HUDSON	18,225	1	237	26	108	2	1	137	108	129
HULL	11,331	0	129	22	81	0	0	64	65	48
HUNTINGTON	2,179	1	31	3	15	0	0	7	9	16
IPSWICH	13,277	0	149	49	100	0	0	78	180	49
KINGSTON	12,115	0	155	86	147	0	0	47	48	8
LAKEVILLE	10,334	0	149	46	70	0	0	38	51	79
LANCASTER	6,762	0	76	34	46	0	0	21	14	30
LANESBOROUGH	2,969	0	24	0	18	0	0	0	13	6
LAWRENCE	77,150	1,583	1,440	578	538	8	5	399	403	902
LEE	5,901	0	61	59	66	3	2	55	39	-5
LEICESTER	10,755	0	101	95	85	0	0	55	63	16
LENEX	5,148	0	32	79	99	0	0	66	134	-67
LEOMINSTER	41,970	1,271	546	537	382	1	0	283	254	164
LEVERETT	1,727	1	13	6	10	0	0	0	6	3
LEXINGTON	30,555	1	225	199	262	1	1	126	182	-37
LEYDEN	794	0	2	1	4	0	0	0	2	-2
LINCOLN	8,066	3	100	8	33	0	0	24	73	67
LITTLETON	8,458	0	124	65	73	0	0	37	32	51
LONGMEADOW	15,653	0	188	116	168	2	2	82	40	20
LOWELL	105,688	2,794	1,790	1,272	863	18	11	699	633	927

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL :	LICENSES :	OCCURRENCE :	
						(2)	(2)	ISSUED :		
								(3)	(4)	
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
LUDLOW	21,625	0	172	70	179	0	0	162	107	-71
LUNENBURG	9,763	0	93	24	67	0	0	42	87	261
LYNN	91,475	4	1,457	618	838	9	8	545	484	619
LYNNFIELD	11,654	0	113	28	86	0	0	47	70	271
MALDEN	56,461	3	814	186	550	4	4	385	355	264
MANCHESTER	5,291	0	49	23	38	0	0	34	50	11
MANSFIELD	22,840	0	374	28	116	0	0	113	72	258
MARBLEHEAD	20,501	0	242	91	171	1	0	110	119	71
MARION	5,276	0	46	68	72	0	0	30	40	-261
MARLBOROUGH	37,697	2	566	345	335	4	4	240	151	231
MARSHFIELD	24,773	0	358	59	165	0	0	147	110	193
MASHPEE	13,868	0	145	60	115	1	1	90	119	301
MATTAPOISETT	6,382	0	44	11	52	0	0	27	49	-81
MAYNARD	10,394	2	169	20	75	0	0	48	40	40
MEDFIELD	12,398	0	136	36	79	0	0	39	22	571
MEDFORD	54,929	3	640	568	602	2	2	348	229	381
MEDWAY	12,840	0	175	57	90	1	1	40	35	851
MELROSE	26,848	1,793	379	546	281	1	0	136	103	981
MENDON	5,594	0	62	9	23	0	0	17	33	391
MERRIMAC	6,287	0	68	16	42	0	0	16	7	261
METHUEN	44,586	1,458	584	615	476	2	2	219	160	1081
MIDDLEBOROUGH	20,660	1	274	115	172	2	2	127	98	1021
MIDDLEFIELD	543	0	6	0	4	0	0	4	4	21
MIDDLETON	8,674	0	91	20	58	0	0	21	23	331
MILFORD	27,227	980	423	493	220	3	3	167	125	2031
MILLBURY	13,152	1	151	122	151	2	1	47	48	01
MILLIS	7,980	1	111	10	42	0	0	38	65	691
MILLVILLE	2,855	0	40	4	9	0	0	10	10	311
MILTON	26,033	4	318	307	246	0	0	121	145	721
MONROE	97	0	2	0	1	0	0	0	0	11
MONSON	8,528	0	98	20	71	1	1	29	23	271
MONTAGUE	8,462	2	92	35	84	0	0	46	33	81

- (1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.
- (2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.
- (3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.
- (4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE:	RESIDENT	OCCURRENCE:	RESIDENT	TOTAL	NEONATAL (2)	LICENSES: OCCURRENCE ISSUED:	(3)	
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
MONTEREY	942	1	6	3	4	0	0	8	8	2
MONTGOMERY	707	0	8	13	10	0	0	0	0	-2
MOUNT WASHINGTON	130	0	0	0	0	0	0	0	0	0
NAHANT	3,645	0	33	38	55	0	0	17	77	-22
NANTUCKET	9,834	87	137	51	64	2	1	221	323	73
NATICK	32,193	4	528	386	295	1	1	196	104	233
NEEDHAM	28,673	1	343	450	308	0	0	109	88	35
NEW ASHFORD	247	0	5	0	0	0	0	0	0	5
NEW BEDFORD	94,759	1,514	1,321	1,469	1,166	10	4	559	505	155
NEW BRAINTREE	1,001	0	8	3	7	0	0	3	2	1
NEW MARLBOROUGH	1,494	0	16	6	11	0	0	6	37	5
NEW SALEM	957	0	12	0	2	0	0	0	5	10
NEWBURY	6,860	0	92	13	40	0	0	17	30	52
NEWBURYPORT	17,535	936	234	348	188	4	3	151	126	46
NEWTON	83,576	3,216	822	550	667	3	3	477	448	155
NORFOLK	10,395	1	138	15	38	0	0	18	23	100
NORTH ADAMS	14,405	276	144	241	237	1	1	105	79	-93
NORTH ANDOVER	27,147	0	328	192	253	1	1	111	142	75
NORTH ATTLEBORO	27,786	2	358	90	195	1	1	149	88	163
NORTH BROOKFIELD	4,786	0	53	7	35	0	0	26	20	18
NORTH READING	13,916	0	167	67	85	1	0	46	57	82
NORTHAMPTON	28,985	881	203	579	289	0	0	204	241	-86
NORTHBOROUGH	14,239	1	169	60	84	0	0	64	53	85
NORTHERIDGE	13,523	0	215	187	183	1	1	79	46	32
NORTHFIELD	3,058	1	18	4	23	0	0	15	29	-5
NORTON	18,545	0	269	64	129	2	2	67	76	140
NORWELL	10,130	0	135	128	97	1	1	38	56	38
NORWOOD	28,731	642	387	685	324	0	0	178	141	63
OAK BLUFFS	3,806	156	64	62	36	0	0	48	74	28
OAKHAM	1,763	0	15	0	9	0	0	0	3	6
ORANGE	7,540	0	88	22	75	0	0	30	33	13
ORLEANS	6,444	0	35	39	104	0	0	71	113	-69

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL :	LICENSES : OCCURRENCE :	ISSUED :	
						(2)	(2)	(3)	(4)	
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
OTIS	1,364	0	7	4	10	0	0	13	3	-3
OXFORD	13,682	1	158	48	111	1	1	78	68	47
PALMER	12,693	1	123	130	161	2	1	76	60	-38
PAXTON	4,482	0	32	4	35	0	0	9	16	-3
PEABODY	49,547	2	514	444	551	1	0	270	225	-37
PELHAM	1,415	1	8	3	8	0	0	1	4	0
PEMBROKE	17,492	0	255	30	98	2	1	73	54	157
PEPPERELL	11,348	1	155	18	60	2	2	43	26	95
PERU	809	0	9	1	3	0	0	1	1	6
PETERSHAM	1,210	1	10	0	8	0	0	4	12	2
PHILLIPSTON	1,641	0	17	0	9	0	0	5	6	8
PITTSFIELD	44,954	777	528	776	560	1	0	345	288	-32
PLAINFIELD	598	0	5	3	5	0	0	3	8	0
PLAINVILLE	7,865	0	117	26	68	2	2	47	20	49
PLYMOUTH	53,507	771	715	578	428	2	1	312	345	287
PLYMPTON	2,698	1	27	7	18	0	0	6	2	9
PRINCETON	3,456	0	31	7	24	0	0	12	83	7
PROVINCETOWN	3,485	0	14	36	55	0	0	39	54	-41
QUINCY	89,167	2	1,154	802	940	6	4	758	618	214
RANDOLPH	31,733	0	418	137	293	3	2	167	152	125
RAYNHAM	12,240	0	140	77	101	0	0	51	51	39
READING	23,582	2	313	95	191	0	0	102	61	122
REHOBOTH	10,718	1	104	19	51	1	1	27	43	53
REVERE	47,051	2	649	181	485	2	2	320	322	164
RICHMOND	1,608	0	8	2	10	0	0	4	3	-2
ROCHESTER	4,925	0	52	12	26	0	0	21	10	26
ROCKLAND	17,950	0	248	77	170	0	0	98	76	78
ROCKPORT	7,834	0	63	54	83	0	0	33	106	-20
ROWE	350	0	4	1	3	0	0	0	0	1
ROWLEY	5,582	0	72	35	39	0	0	23	16	33
ROYALSTON	1,306	0	6	0	4	0	0	2	4	2
RUSSELL	1,678	2	19	0	8	1	0	6	11	11

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL :	ISSUED :	OCCURRENCE :	
						(2)	(3)	(4)		
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
RUTLAND	6,793	0	101	10	32	0	0	23	22	69
SALEM	42,031	1,736	540	740	374	3	3	362	314	166
SALISBURY	7,976	0	100	19	57	0	0	39	49	43
SANDISFIELD	822	0	6	6	19	0	0	3	2	-13
SANDWICH	20,677	0	184	142	144	1	1	98	126	40
SAUGUS	26,418	1	253	123	267	0	0	106	93	-14
SAVOY	711	0	7	0	4	0	0	3	4	3
SCITUATE	18,121	1	219	95	138	0	0	82	173	81
SEEKONK	13,661	0	140	25	112	1	1	99	74	28
SHARON	17,492	0	181	47	107	0	0	56	106	74
SHEFFIELD	3,329	1	23	12	28	0	0	19	21	-5
SHELBURNE	2,070	0	17	30	30	0	0	6	12	-13
SHERBORN	4,201	0	49	4	14	0	0	9	39	35
SHIRLEY	7,328	1	74	11	33	0	0	33	38	41
SHREWSBURY	32,708	0	485	113	251	2	2	132	93	234
SHUTESBURY	1,829	0	14	0	2	0	0	4	3	12
SOMERSET	18,640	0	126	129	228	1	1	89	60	-102
SOMERVILLE	76,926	2	905	233	577	1	1	479	290	328
SOUTH HADLEY	17,129	0	156	103	200	3	3	91	90	-44
SOUTHAMPTON	5,552	0	50	8	41	0	0	21	16	9
SOUTHBOROUGH	9,184	1	133	16	47	0	0	36	33	86
SOUTHERIDGE	17,479	482	231	202	192	4	3	141	99	39
SOUTHWICK	9,121	0	85	22	78	1	0	58	41	7
SPENCER	11,933	0	131	25	110	0	0	72	118	21
SPRINGFIELD	154,265	5,700	2,357	2,154	1,397	23	16	906	838	960
STERLING	7,563	2	84	21	67	0	0	36	71	17
STOCKBRIDGE	2,255	0	15	6	17	0	0	17	34	-2
STONEHAM	22,053	0	258	98	239	0	0	122	75	19
STOUGHTON	27,147	3	320	318	248	0	0	139	123	72
STOW	6,048	0	73	13	30	1	0	18	18	43
STURBRIDGE	8,227	1	98	10	71	1	0	119	157	27
SUDBURY	17,147	0	223	94	111	1	1	54	238	112

(1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL :	ISSUED :	(4)	
						(2)	(2)	(3)		
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
SUNDERLAND	3,826	1	32	15	14	0	0	21	9	18
SUTTON	8,701	1	110	9	51	0	0	30	53	59
SWAMPSCOTT	14,484	0	167	95	155	0	0	63	64	12
SWANSEA	16,173	0	131	65	141	1	1	77	91	-10
TAUNTON	56,674	626	752	549	521	6	5	361	321	231
TEMPLETON	7,132	2	88	63	82	0	0	21	38	6
TEWKSBURY	29,171	1	373	142	233	0	0	140	96	140
TISBURY	3,826	1	48	21	41	0	0	55	47	7
TOLLAND	430	0	3	1	3	0	0	1	0	0
TOPSFIELD	6,233	0	51	60	59	0	0	15	53	-8
TOWNSEND	9,273	0	99	15	43	0	0	42	40	56
TRURO	2,148	1	15	8	16	0	0	18	41	-1
TYNGSBOROUGH	11,264	0	147	18	63	0	0	62	40	84
TYRINGHAM	361	0	3	4	5	0	0	1	2	-2
UPTON	6,070	0	103	10	35	0	0	34	24	68
UXBRIDGE	11,762	0	179	29	93	0	0	81	126	86
WAKEFIELD	24,692	0	348	201	253	1	1	122	141	95
WALES	1,766	0	16	2	11	0	0	10	6	5
WALPOLE	23,099	0	293	111	203	0	0	97	82	90
WALTHAM	58,995	4	672	400	481	4	4	452	324	191
WARE	9,738	164	103	103	122	2	1	57	50	7
WAREHAM	20,871	503	272	296	249	3	2	154	125	23
WARREN	4,856	0	70	10	38	1	1	20	13	32
WARWICK	756	0	5	5	11	0	0	1	2	-6
WASHINGTON	540	0	4	1	2	0	0	2	20	2
WATERTOWN	32,697	1	363	128	303	2	1	276	188	60
WAYLAND	13,168	0	143	97	92	0	0	36	40	51
WEBSTER	16,727	1	215	247	204	0	0	115	120	11
WELLESLEY	26,999	94	346	124	181	0	0	82	84	165
WELFLEET	2,815	0	23	12	22	0	0	25	34	1
WENDELL	1,009	0	7	0	3	0	0	0	2	4
WENHAM	4,667	0	38	9	33	0	0	8	11	5

- (1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.
- (2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.
- (3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.
- (4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
2002

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED	OCCURRENCE	
STATE TOTAL	6,429,761	81,699	80,624	57,541	56,881	397	299	37,735	37,735	23,743
WEST BOYLSTON	7,568	0	53	56	69	3	3	43	54	-16
WEST BRIDGEWATER	6,805	0	67	74	79	0	0	33	51	-12
WEST BROOKFIELD	3,881	0	40	55	39	0	0	11	58	1
WEST NEWBURY	4,249	0	49	7	18	0	0	6	8	31
WEST SPRINGFIELD	27,980	1	339	164	301	3	2	168	168	38
WEST STOCKBRIDGE	1,437	0	13	0	10	0	0	0	11	3
WEST TISBURY	2,584	1	17	8	12	0	0	22	36	5
WESTBOROUGH	18,540	0	240	131	147	0	0	106	101	93
WESTFIELD	40,280	2	458	384	367	0	0	198	237	91
WESTFORD	21,125	2	273	87	94	0	0	78	71	179
WESTHAMPTON	1,508	0	15	2	5	0	0	4	7	10
WESTMINSTER	7,144	0	78	9	55	1	1	35	71	23
WESTON	11,595	0	106	82	90	0	0	40	81	16
WESTPORT	14,565	0	128	46	130	0	0	65	105	-2
WESTWOOD	14,125	0	175	53	140	0	0	46	33	35
WEYMOUTH	54,493	4,075	702	974	555	2	2	274	205	147
WHATELY	1,576	0	15	3	16	0	0	7	9	-1
WHITMAN	14,303	1	208	31	102	1	1	93	74	106
WILBRAHAM	13,715	0	89	152	139	0	0	72	57	-50
WILLIAMSBURG	2,427	0	20	8	27	0	0	6	11	-7
WILLIAMSTOWN	8,338	0	35	160	95	0	0	35	63	-60
WILMINGTON	21,509	0	302	167	151	1	1	84	60	151
WINCHENDON	9,903	0	138	30	105	0	0	53	43	33
WINCHESTER	20,978	2,429	266	503	217	0	0	90	107	49
WINDSOR	860	1	7	0	3	0	0	4	4	4
WINTHROP	18,116	0	179	83	202	0	0	99	84	-23
WOBURN	37,722	2	476	184	350	2	1	228	198	126
WORCESTER	176,905	6,148	2,617	3,158	1,820	23	16	1,352	1,233	797
WORTHINGTON	1,289	0	5	2	13	0	0	5	14	-8
WRENTHAM	10,914	0	131	74	89	1	1	35	103	42
YARMOUTH	25,124	0	202	203	388	0	0	176	198	-186
UNKNOWN	0	0	0	0	0	0	0	0	0	0

- (1) POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS  
THE TOWN POPULATIONS DO NOT SUM TO THE TOTAL POPULATION OF THE STATE DUE TO ROUNDING IN ESTIMATION ALGORITHM.
- (2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.
- (3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE  
AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.
- (4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4B  
VITAL EVENTS BY COUNTY  
2002

COUNTY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		DIVORCES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL	(3)	(3)	(3)	(3)	
STATE TOTAL	16,429,761	81,699	80,624	57,541	56,881	397	299	37,735	16,253	23,743		
BARNSTABLE	227,533	1,664	1,966	2,598	2,714	10	7	2,488	528	-748		
BERKSHIRE	133,305	1,221	1,240	1,625	1,591	8	6	967	341	-351		
BRISTOL	544,272	4,929	6,675	4,851	5,254	36	27	2,915	1,542	1,421		
DUKES	15,407	158	187	112	127	0	0	428	55	60		
ESSEX	742,110	8,135	9,584	6,296	6,659	41	32	4,295	1,982	2,925		
FRANKLIN	71,960	460	653	486	646	0	0	386	275	7		
HAMPDEN	461,833	6,269	5,729	4,924	4,654	44	33	2,529	1,216	1,075		
HAMPSHIRE	152,916	1,056	1,309	1,046	1,234	9	6	758	374	75		
MIDDLESEX	1,470,868	16,563	18,773	11,002	11,749	74	53	7,700	2,911	7,024		
NANTUCKET	9,834	87	137	51	64	2	1	323	36	73		
NORFOLK	655,466	4,833	8,389	5,280	5,794	34	30	3,281	1,485	2,595		
PLYMOUTH	487,150	3,500	6,457	3,655	4,086	22	19	2,660	1,382	2,371		
SUFFOLK	685,626	23,340	9,456	8,537	5,408	60	43	4,475	1,510	4,048		
WORCESTER	771,481	9,484	10,069	7,078	6,901	57	42	4,530	2,616	3,168		
UNKNOWN	0	0	0	0	0	0	0	0	0	0		
POPULATION ESTIMATES FOR MASSACHUSETTS COUNTIES: JULY 1, 2002. POPULATION PROGRAM, MASSACHUSETTS												
(1) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.												
(3) MARRIAGE AND DIVORCE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.												

## BIRTHS



## SECTION B

### BIRTHS

There were 80,624 live births to Massachusetts residents in 2002, a 0.5% decrease from the 81,014 resident live births in 2001. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which the births occurred. Most data presented in this section are resident data. Table B-13 presents births by licensed maternity facility of occurrence, which includes births to women who live in other states.

#### OCCURRENCE BIRTHS

In 2002, 81,699 births occurred in Massachusetts. All but 300 births occurred at the 52 licensed maternity facilities in this state. The number of babies delivered at these maternity facilities ranged from 85 at Nantucket Cottage Hospital to 9,859 at Brigham and Women's Hospital in Boston. The four hospitals with the greatest numbers of births were Brigham and Women's Hospital (9,859), Beth Israel Deaconess Medical Center (4,947), UMASS Memorial Medical Center - West Campus (4,383) and Baystate Medical Center (4,380) and they represented 28.8% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below.

2002 DISTRIBUTION OF MASSACHUSETTS  
OCCURRENCE BIRTHS BY FACILITY

NUMBER OF BIRTHS AT HOSPITAL	NUMBER OF HOSPITALS IN CATEGORY	TOTAL NUMBER OF BIRTHS IN CATEGORY	% OF TOTAL BIRTHS
< 500	10	2,044	2.5
500-999	13	9,499	11.6
1000-1499	8	9,699	11.9
1500-1999	9	14,796	18.1
≥ 2000	12	45,361	55.5
All other <sup>1</sup>		300	0.4
TOTAL	52	81,699	100.0

<sup>1</sup> Includes hospitals without maternity units, home births, births en route to hospital and births occurring in a doctor's office/clinic.

## BIRTHS BY RACE/ETHNICITY

There are two points to keep in mind when analyzing 2002 data by race/ethnicity. First, since June 1986, information on both race and ethnicity rather than just race has been collected. This provides improved data, particularly for Hispanic births. Presented for comparison below are resident birth data for calendar years 2001 and 2002, utilizing maternal race and Hispanic ethnicity information:

### RACE AND HISPANIC ETHNICITY OF MOTHER 2001 - 2002

MATERNAL RACE/ETHNICITY	2002		2001		CHANGE (2001-2002)
	TOTAL BIRTHS	% OF BIRTHS	TOTAL BIRTHS	% OF BIRTHS	
White non-Hispanic	58,136	72.1	59,115	73.0	-979
Black non-Hispanic	5,948	7.4	5,862	7.2	86
Hispanic	9,543	11.8	9,410	11.6	133
Asian	5,300	6.6	4,784	5.9	516
Other <sup>1</sup>	1,576	2.0	1,698	2.1	-122
Unknown <sup>2</sup>	121	0.2	145	.2	-24
TOTAL <sup>3</sup>	80,624	100	81,014	100	-390

<sup>1</sup>Other races include American Indian, Hawaiian, and Other.

<sup>2</sup>Unknown race: mothers did not indicate a race/ethnicity.

The other point which must be considered is the method used to present data by race/ethnicity. Massachusetts follows the recommendation from the National Center for Health Statistics (NCHS) for classifying race/ethnicity on the birth certificate according to the self-reported race/ethnicity of the mother. Beginning with 1989 births, birth data are presented by race/ethnicity of the mother only.

## TEEN BIRTHS

The number of births to mothers aged 15-19 decreased from 4,979 in 2001 to 4,642 in 2002. The teen birth rate decreased, from the rate of 24.3 in 2001 to the 2002 rate of 22.6 births per 1,000 women aged 15-19. The teen birthrate in Massachusetts has declined by 31% since 1990.

## BIRTHS BY MARITAL STATUS

The percentage of births to unmarried women increased slightly from 26.7% of all resident births in 2001 to 26.8% of all resident births in 2002. Over 90% of mothers under the age of 20 were unmarried while 22.8% of the mothers over the age of 20 were unmarried.

## BIRTHS BY AGE OF MOTHER

The largest percentage increases in births between the years 2001 and 2002 (21.5%) were to mothers in the 45+ age group, as shown below. This percentage is based on relatively few births and should be interpreted with caution.

AGE OF MOTHER	NUMBER OF BIRTHS 2002	NUMBER OF BIRTHS 2001	DIFFERENCE IN THE NUMBER OF BIRTHS 2001-2002	PERCENTAGE CHANGE 2001-2002
< 20	4,715	5,057	-342	-6.8
20-24	11,880	12,029	-149	-1.2
25-29	18,484	19,015	-531	-2.8
30-34	27,163	26,948	215	0.8
35-39	15,121	14,750	351	2.4
40-44	3,085	3,069	16	0.5
≥ 45	175	144	31	21.5

## BIRTHS BY CAESAREAN SECTION

The number of Caesarean section deliveries in Massachusetts increased from 21,058 in 2001 to 22,947 in 2002, an increase of about 9.0%. Caesarean section was the method of delivery for 25.7% of the 2001 occurrence births, compared to the 28.2% of Caesarean section deliveries in 2002. (Calculations are based on births with known method of delivery.)

## HOSPITAL PROFILES

The following is a synopsis of hospital data, some of which is presented in Table B-13A and Table B-13B:

- In 2002, 81,699 births occurred in Massachusetts, a decrease of 12.1% since 1990. Caesarean section was the method of delivery for 28.2% of 2002 births. (Calculations are based on births with known method of delivery.)
- In 2002, the Caesarean section rate was less than 30% for the ninth consecutive year. Fourteen hospitals had Caesarean section delivery rates of 30% or more: Beth Israel Deaconess Medical Center, Cambridge Hospital, Caritas Good Samaritan Medical Center, Caritas Norwood Hospital, Emerson Hospital, Falmouth Hospital, Holy Family Hospital and Medical Center, Martha's Vineyard Hospital, Melrose-Wakefield Hospital, Metrowest Medical Center - Framingham Union Campus, Milford-Whitinsville Regional Hospital, Newton Wellesley Hospital, St. Elizabeth's Medical Center, and Sturdy Memorial Hospital.
- Statewide, the lowest rates of Caesarean section deliveries were at the following licensed maternity facilities: Nantucket Cottage Hospital (15.2%), Tobey Hospital (17.7%), Berkshire Medical Center (18.8%), Mercy Medical Center (20.9%), Cooley Dickinson Hospital (21.8%), St. Luke's Hospital (22.1%), and Lawrence General Hospital (22.6%).
- In 2002, at least 10% of the births in seven hospitals were low birthweight. These hospitals were: Baystate Medical Center, Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Boston Medical Center, New England Medical Center, St. Elizabeth's Medical Center, and UMass Memorial Medical Center - West Campus.
- In seven hospitals, 50% or more of the deliveries were paid with public funds: Boston Medical Center, Cambridge Hospital, Holyoke Hospital, Brockton Hospital, Mercy Medical Center, St. Luke Hospital, and Lawrence General Hospital. In four facilities, less than 10% of deliveries were paid with public funds: Emerson Hospital, Newton-Wellesley Hospital, The Birthplace at Wellesley, and Winchester Hospital.
- In 2002, 25 of the 52 licensed maternity facilities exceeded the state-wide average (84.7%) for adequacy of prenatal care for their patients. The three maternity facilities with the lowest reported rate of women who had received adequate prenatal care were: Tobey Hospital (45.9%), Boston Medical Center (52.3%), and Berkshire Medical Center (54.1%).

## LOW BIRTHWEIGHT INFANTS

The percentage of low birthweight infants (less than 2,500 grams or five pounds eight ounces) increased from 7.1% in 2001 to 7.5% in 2002. The number of low birthweight deliveries increased from 5,839 births in 2001 to 6,127 births in 2002.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:



## **ADEQUACY OF PRENATAL CARE UTILIZATION**

Beginning in 2001, adequacy of prenatal care is being measured using a new method. The Adequacy of Prenatal Care Utilization (APNCU) Index, developed by Dr. Milton Kotelchuck, replaced the Kessner Index, which has been used to date in the Advanced Data Births and Massachusetts Births series. The APNCU Index is the standard used in Healthy People 2010 and by the majority of states. It improves upon the Kessner Index in various ways, the most important being the ability to distinguish between inadequate prenatal care due to the timing of initiation and inadequate care due to insufficient prenatal care visits. The APNCU Index also improves upon the Kessner Index by correcting some of its principle faults. First, the APNCU Index more accurately assesses adequacy of visits for term pregnancies; the Kessner Index characterizes 9 or more visits as adequate, due to an early computer database limitation, which only allowed for a single-digit number to record prenatal care visits. Other faults of the Kessner Index include its bias towards measurement of adequacy of initiation of care, and its various computational algorithms due to inadequate initial documentation.

Table B-1 of this report provides a comparison of data on adequacy of prenatal care from 1996-2002 as measured by these two separate indices. Below are the definitions for the APNCU Index categories and its two component indices (initiation and received services), and the definition of the Kessner Index categories. Also below is a short summary of the major differences in classification of adequacy of prenatal care using the Kessner Index and the APNCU Index.

### **Adequacy of Prenatal Care Utilization (APNCU) Index: Definition of Categories**

Category	Month Prenatal Care Began	% of Expected <sup>1</sup> Prenatal Care Visits
Adequate Intensive	1, 2, 3, or 4	110% or more
Adequate Basic	1, 2, 3, or 4	80 – 109%
Intermediate	1, 2, 3, or 4	50 – 79%
Inadequate	Month 5 or later	Less than 50%
Unknown	Prenatal care information not recorded	

1. The number of "expected" visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

## Component Indices of the APNCU Index: Definitions of Categories

### Adequacy of Initiation Index

Category	Month Prenatal Care Began
Adequate Intensive	1 or 2
Adequate Basic	3 or 4
Intermediate	5 or 6
Inadequate	Month 7 or later, or no PNC
Unknown	Prenatal care initiation information not recorded

### Adequacy of Received Services (Visits) Index

Category	% of Expected <sup>1</sup> Prenatal Care Visits
Adequate Intensive	110% or more
Adequate Basic	80 – 109%
Intermediate	50 – 79%
Inadequate	Less than 50%
Unknown	Information on prenatal care visits not recorded

### Kessner Index of Adequacy of Prenatal Care: Definition of Categories

Category	Trimester Care Began	Number of Visits
Adequate	1	9 or more
Intermediate	1	5-8
	2	5 or more
Inadequate	1	1-4
	2	1-4
	3	1 or more
No Prenatal	--	0
Unknown	Unknown	Unknown

1. The number of “expected” visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

**Summary of Major Differences in Categorization of Adequacy of Prenatal Care between the Kessner Index and the APNCU Index**

The two different methods used in the Kessner Index and APNCU Index to calculate adequacy of prenatal care can result in differences in how each one classifies adequacy of prenatal care. These differences only occur under certain conditions, not in all cases (see "Explanation" column).

<b>The Kessner Index classifies prenatal care as...</b>	<b>... but the APNCU Index classifies prenatal care as ...</b>	<b>Explanation</b>
<b>Intermediate</b>	<b>Adequate Basic</b>	This is primarily due to the fact that the APNCU Index allows for prenatal care in the 4 <sup>th</sup> month of pregnancy to be considered adequate if the mother received 80-109% of expected visits, whereas the Kessner Index only allows for care begun in the first trimester (months 1-3) to be considered adequate.
<b>Intermediate</b>	<b>Inadequate</b>	This is primarily due to the fact that the APNCU categorizes any prenatal care beginning after month 4 as "inadequate" whereas the Kessner Index allows for care beginning in months 5 or 6 with 5 or more visits to be "intermediate."
<b>Adequate</b>	<b>Intermediate</b>	This is primarily due to the consideration of "expected" visits (based on when the mother initiated care and the length of gestation) using the APNCU Index, which bases expected visits on the ACOG recommendations, <sup>1</sup> which can be as high as 14 visits if a gestational period is 40 weeks, whereas the Kessner Index considers 9 visits sufficient in all cases.
<b>Adequate</b>	<b>Adequate Intensive</b>	The APNCU Index added an "Adequate Intensive" category, which is not used in the Kessner Index. This allows analysis of situations in which more than normal care is received (e.g. women with high risk conditions, pregnancy complications).

1. The number of "expected" visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

## ANCESTRY

A self-reported item on the birth certificate, with listings and an open text field. The items listed are:

Puerto Rican	Cambodian	Cape Verdean	Other African
Dominican	Asian Indian	Brazilian	Lebanese
Mexican	Korean	Other Portuguese	Iranian
Cuban	Filipino	Haitian	Israeli
Columbian	Japanese	Jamaican	Other Mid. Eastern
Salvadorian	Laotian	Barbadian	Native American
Other Central Amer.	Pakistani	African American	European
Other South Amer.	Thai	Nigerian	Other
Other Hispanic	Hawaiian	Other West Indian / Caribbean	
Chinese	Other Asian/Pac. Isl.		

## BIRTH CERTIFICATE

A vital record signed by a certifier that includes the infant's name, sex, birth date, place of residence, and place of occurrence.

## BIRTHWEIGHT

The weight of an infant recorded at the time of delivery. It may be recorded in either pounds/ounces or grams. If recorded in pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams

1,000 grams = 2 pounds, 3 ounces

## BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW)	An infant's weight of 2,500 grams (5.5 pounds) or more recorded at birth.
Low birthweight (LBW)	An infant's weight of less than 2,500 grams (5.5 pounds) recorded at birth.
Very low birthweight (VLBW)	An infant's weight of less than 1,500 grams (3.3 pounds) recorded at birth.

## CAESAREAN SECTION or C-SECTION

Primary: A mother's first Caesarean section delivery.

Repeat: A Caesarean delivery that has been preceded by at least one Caesarean delivery.

## COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. The Department of Public Health has fostered in each of these areas the development of Community Health Networks: a consortia of health care

providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers to address the health needs of the community. These community coalitions participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. The city of Boston constitutes its own Community Health Network Area. It is hoped that the networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

### ETHNICITY

See Race.

### FOREIGN-BORN WOMEN

Women not born in the United States, its possessions or protectorates. Women born in Puerto Rico, the US Virgin Islands, and Guam are not foreign-born.

### HEALTHY START

A Massachusetts-funded program providing services and financing for prenatal care to low-income pregnant women who lack health insurance, but do not qualify for Medicaid.

### INFANT

A child whose age is less than one year (365 days).

### LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

### LOW BIRTHWEIGHT (LBW)

See Birthweight Categories.

### NEONATAL

Referring to a child under 28 days of age.

### **NORMAL BIRTHWEIGHT (NBW)**

See Birthweight Categories.

### **OCCURRENCE BIRTH**

A birth occurring in the Commonwealth of Massachusetts, regardless of the residency of the mother. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

### **PARITY**

Total number of live births, including the present birth, ever born to the mother.

### **PLURALITY**

The number of births to a woman produced in the same gestational period. A singleton is the birth of one infant, twins represent the births of two infants, etc.

### **POST-NEONATAL**

Referring to a child whose age is at least 28 days, but less than one year.

### **PRIMARY CAESAREAN SECTION or C-SECTION**

See Caesarean Section.

### **RACE**

Race of mother: For data presented in this publication, mother's race is as reported by the infant's mother. The tables that use race or ethnicity in this document all refer to the mother's race or ethnicity.

Ethnicity: Beginning in 1986, an identifier for Hispanic and other ethnicities was added to the birth certificate. Prior to this change, most Hispanics were included with Whites and it was not possible to accurately calculate Hispanic-specific rates of natality.

### **REPEAT CAESAREAN SECTION or C-SECTION**

See Caesarean Section.

### **RESIDENT BIRTH**

The birth of an infant whose mother reports that her usual place of residence is in Massachusetts. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented in terms either of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events that occur to residents of the Commonwealth, wherever they occur. Occurrence data include all events that occur within the state, whether to residents or non-residents. There is an exchange agreement among the 50

states, Canadian provinces, Puerto Rico, Guam, the U.S. Virgin Islands, and the District of Columbia that provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

#### VAGINAL BIRTH AFTER CAESAREAN (VBAC)

A vaginal delivery of an infant to a mother who had had at least one prior Caesarean section delivery.

#### VERY LOW BIRTHWEIGHT (VLBW)

See Birthweight Categories.

#### RATES IMPORTANT FOR THIS SECTION INCLUDE:

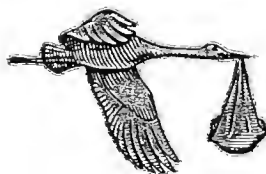
AGE-SPECIFIC BIRTH RATE	$\frac{\text{No. of Resident Live Births for a Specific Age Group of Mothers}}{\text{Total Female Population of That Specific Age Group}} \times 1,000$
CRUDE BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
GENERAL FERTILITY RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Female Population of Childbearing Age (15-44)}} \times 1,000$
CAESAREAN SECTION or C-SECTION RATE	$\frac{\text{No. of Resident Births Delivered by C-Section}}{\text{Total Number of Resident Births}} \times 100$

## Figure B-1. Daily Birth Statistics, Massachusetts: 2002

Every day in 2002, residents of Massachusetts experienced an average of:



221 Births



62 Births by Caesarean Section



50 Births to women aged 35 or older



35 Births with less than adequate prenatal care



17 Births weighing less than 2500 grams or 5 lbs. 8 oz. (low birthweight)



13 Births to women aged 15 through 19



Table B-1. Trends in Birth Characteristics, Massachusetts: 1980, 1985, 1990, 1995, 1998, 1999, 2000, 2001, 2002

Characteristic	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Births<sup>1</sup></b>															
n <sup>2</sup>	72,591	81,781	92,461	88,176	87,202	84,627	83,758	81,562	80,184	80,321	81,406	80,866	81,582	81,014	80,624
Rate <sup>3</sup>	53.4	57.5	62.1	59.4	59.1	57.6	57.0	55.5	54.6	54.7	55.6	55.9	57.2	56.8	56.5
<b>Race of Mother</b>															
<b>White<sup>4</sup></b>															
n	66,220	71,854	80,775	76,983	76,052	73,704	72,980	71,083	69,485	69,503	70,452	69,305	69,371	68,728	67,874
% <sup>5</sup>	91.2	87.9	87.4	87.3	87.2	87.1	87.1	87.2	86.7	86.5	86.5	85.7	85.0	84.8	84.2
<b>Black</b>															
n	4,626	5,099	7,729	7,352	7,203	6,916	6,713	6,299	5,946	6,182	6,337	6,524	6,445	6,555	6,649
% <sup>5</sup>	6.4	6.2	8.3	8.3	8.3	8.2	8.0	7.7	7.4	7.7	7.8	8.1	7.9	8.1	8.2
<b>Asian/Other<sup>6</sup></b>															
n	1,069	1,741	3,688	3,566	3,582	3,664	3,790	3,817	3,950	4,217	4,248	4,615	5,205	5,279	5,793
% <sup>5</sup>	1.5	2.1	4.0	4.0	4.1	4.3	4.5	4.7	4.9	5.3	5.2	5.7	6.4	6.5	7.2
<b>Unknown</b>															
n	676	3,087	269	275	365	343	275	363	783	419	369	422	561	452	308
% <sup>5</sup>	0.9	3.8	0.3	0.3	0.4	0.4	0.3	0.4	1.0	0.5	0.5	0.5	0.7	0.6	0.4
<b>Teen Births (Ages 15-19)</b>															
n	7,694	6,859	7,258	6,892	6,555	6,469	6,412	5,990	5,758	5,801	5,823	5,515	5,305	4,979	4,642
Rate <sup>3</sup>	28.1	28.7	35.4	35.4	34.5	34.0	33.2	30.3	28.5	28.5	28.1	26.7	25.8	24.3	22.6
<b>Births to Unmarried Mothers</b>															
n	11,356	15,044	22,837	22,852	22,612	22,345	22,302	20,857	20,253	20,640	21,191	21,448	21,621	21,620	21,604
%	15.6	18.4	24.7	25.9	25.9	26.4	26.6	25.6	25.3	25.7	26.0	26.5	26.5	26.7	26.8
<b>Low Birthweight</b>															
n	4,413	4,751	5,388	5,199	5,137	5,202	5,335	5,174	5,105	5,617	5,655	5,708	5,711	5,795	6,060
%	6.1	5.8	5.8	5.9	5.9	6.2	6.4	6.4	6.4	7.0	7.0	7.1	7.1	7.2	7.5
<b>Preterm</b>															
n	6,732	6,009	6,313	6,492	6,438	5,705	5,831	6,117	6,136	5,831	6,117	6,136	6,582	6,412	6,795
%	7.4	6.8	7.3	7.8	7.9	7.2	7.3	7.6	7.6	7.3	7.6	7.6	8.3	8.0	8.5
<b>Adequate Prenatal Care</b>															
Kessner Index <sup>7</sup>	82.0	79.4	80.1	81.6	82.9	83.8	84.3	84.2	79.9	80.0	79.8	79.4	79.1	80.4	79.9
APNCU Index <sup>8</sup>									83.3	82.9	82.9	82.9	83.3	85.2	84.7

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births presented in all tables are resident live births unless otherwise specified. 2. Differences in numbers of births from previous publications are the result of updated files. 3. Birth rates represent the total number of births to women ages 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 women ages 15-19. 2000-2002 birth rates are calculated using DPH 2000 population estimates, based on U.S. Census 2000 population counts. 1999 rates are calculated using the 1999 DPH Massachusetts population estimates. PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES. 4. On tables and graphs that include data prior to June 1986, the race classifications do not include an ethnicity component; most Hispanics are included in the race category of white. 5. Percentages are calculated based on all births, including those to mothers of unknown race. 6. Other races include American Indian and others not specified. 7. Adequacy of prenatal care in Massachusetts has historically been measured with the Kessner Index, based on the timing of care and number of visits. This measure is calculated based on only those births with known adequacy of prenatal care in the calculation of the Kessner Index in 1996, as well as computational adjustments made for 1996-2000 data, make data prior to 1996 non-comparable to data from 1996 onward. 8. Beginning with last year's publication, the APNCU index has replaced the Kessner Index as the standard measurement of adequacy of prenatal care (see Section Definitions for more information).

**Table B-2A. Birth Characteristics by Maternal Race, Hispanic Ethnicity, and Birthplace, Massachusetts: 2002**

Race and Hispanic Ethnicity (by mother's birthplace)	Births <sup>1</sup>		Teen Births				Birthweight				Prenatal Care				Caesarean Section				Breastfeeding <sup>5</sup>			
			<18 Years		>20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>		Adequate <sup>4</sup>		First Trimester		Section							
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<b>State Total</b>	80,624	100.0	1,571	1.9	4,715	5.8	1,109	1.4	6,060	7.5	67,784	84.7	67,457	84.2	22,553	28.1	60,266	76.1				
U.S. States/D.C.	59,625	74.0	1,220	2.0	3,615	6.1	782	1.3	4,474	7.5	51,063	86.3	51,378	86.7	16,813	28.3	42,382	72.6				
Puerto Rico/U.S. Terr. <sup>7</sup>	2,081	2.6	156	7.5	381	18.3	56	2.7	228	11.0	1,627	78.9	1,551	75.0	487	23.6	1,498	72.7				
Non-U.S.-Born <sup>8</sup>	18,825	23.3	194	1.0	715	3.8	266	1.4	1,340	7.1	15,024	80.4	14,456	77.2	5,222	27.8	16,386	87.4				
<b>White non-Hispanic</b>	58,136	72.1	598	1.0	2,167	3.7	666	1.1	3,952	6.8	50,347	87.1	50,763	87.8	16,737	28.9	42,458	74.7				
U.S. States/D.C.	52,139	89.7	566	1.1	2,019	3.9	600	1.2	3,597	6.9	45,304	87.4	45,873	88.4	14,965	28.8	37,288	73.1				
Puerto Rico/U.S. Terr. <sup>7</sup>	40	0.1	3	-- <sup>6</sup>	3	-- <sup>6</sup>	6	15.0	12	30.0	32	84.2	30	76.9	14	35.0	27	81.8				
Non-U.S.-Born <sup>8</sup>	5,887	10.1	28	0.5	144	2.4	57	1.0	332	5.6	4,956	84.5	4,803	81.8	1,733	29.5	5,143	87.9				
<b>Black non-Hispanic</b>	5,948	7.4	229	3.9	630	10.6	182	3.1	747	12.6	4,370	74.8	4,199	71.4	1,769	29.9	4,540	77.0				
U.S. States/D.C.	3,179	53.4	213	6.7	552	17.4	107	3.4	446	14.1	2,404	76.8	2,312	73.4	867	27.4	2,102	66.9				
Puerto Rico/U.S. Terr. <sup>7</sup>	25	0.4	0	0.0	2	-- <sup>6</sup>	2	-- <sup>6</sup>	4	-- <sup>6</sup>	19	79.2	17	70.8	10	41.7	22	91.7				
Non-U.S.-Born <sup>8</sup>	2,739	46.0	16	0.6	76	2.8	71	2.6	294	10.7	1,944	72.5	1,868	69.2	892	32.7	2,416	88.6				
<b>Hispanic</b>	9,543	11.8	607	6.4	1,557	16.3	162	1.7	792	8.3	7,491	79.0	7,155	75.3	2,325	24.5	7,702	81.0				
U.S. States/D.C.	3,106	32.5	343	11.0	842	27.1	52	1.7	307	9.9	2,419	78.4	2,323	75.2	691	22.3	2,152	69.7				
Puerto Rico/U.S. Terr. <sup>7</sup>	2,009	21.1	153	7.6	376	18.7	48	2.4	212	10.6	1,570	78.7	1,498	75.0	461	23.1	1,444	72.3				
Non-U.S.-Born <sup>8</sup>	4,428	46.4	111	2.5	339	7.7	62	1.4	273	6.2	3,502	79.6	3,334	75.5	1,173	26.6	4,106	92.8				
<b>Asian</b>	5,300	6.6	80	1.5	206	3.9	76	1.4	424	8.0	4,328	81.9	4,138	78.3	1,275	24.1	4,248	80.5				
U.S. States/D.C.	537	10.1	62	11.5	112	20.9	12	2.2	63	11.8	440	82.4	400	74.9	118	22.1	417	78.2				
Puerto Rico/U.S. Terr. <sup>7</sup>	2	-- <sup>6</sup>	0	0.0	0	0.0	0	0.0	0	0.0	2	-- <sup>6</sup>	2	-- <sup>6</sup>	1	-- <sup>6</sup>	2	-- <sup>6</sup>				
Non-U.S.-Born <sup>8</sup>	4,745	89.5	18	0.4	92	1.9	64	1.3	358	7.5	3,874	81.9	3,724	78.6	1,151	24.3	3,829	80.8				
<b>Other<sup>9</sup></b>	1,576	2.0	56	3.6	151	9.6	22	1.4	137	8.7	1,191	76.3	1,143	73.0	421	26.8	1,275	81.9				
U.S. States/D.C.	564	35.8	35	6.2	89	15.8	10	1.8	54	9.6	445	79.9	420	75.1	149	26.7	387	69.7				
Puerto Rico/U.S. Terr. <sup>7</sup>	3	-- <sup>6</sup>	0	0.0	0	0.0	0	0.0	0	0.0	3	100.0	3	-- <sup>6</sup>	1	-- <sup>6</sup>	2	-- <sup>6</sup>				
Non-U.S.-Born <sup>8</sup>	1,009	64.0	21	2.1	62	6.1	12	1.2	83	8.2	743	74.3	720	71.8	271	26.9	886	88.8				
<b>Unknown<sup>10</sup></b>	121	0.2	1	-- <sup>6</sup>	4	-- <sup>6</sup>	1	-- <sup>6</sup>	8	9.9	57	79.2	59	80.8	26	31.3	43	70.5				

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the first category, "Births", percentages of race/Hispanic ethnicity are based on state total of births (including births of unknown race/ethnicity), percentages of mother's birthplace categories are based on subtotals of each race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Beginning with last year's publication, the Adequacy of Prenatal Care Utilization Index has replaced the Kessler Index as the measure of adequate prenatal care. 5. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 6. Calculations based on fewer than five events are excluded. 7. The category "Puerto Rico/U.S. Territories" includes women born in Puerto Rico, the U.S. Virgin Islands, and Guam. Approximately 95% of the births in this category were to women born in Puerto Rico. 8. The category "Non-U.S.-Born" includes women born outside of the 50 U.S. states, District of Columbia, and Puerto Rico/U.S. territories. 9. Other: Mothers who designated themselves as American Indian or Other race. 10. Unknown: Mothers who did not indicate a race/ethnicity.

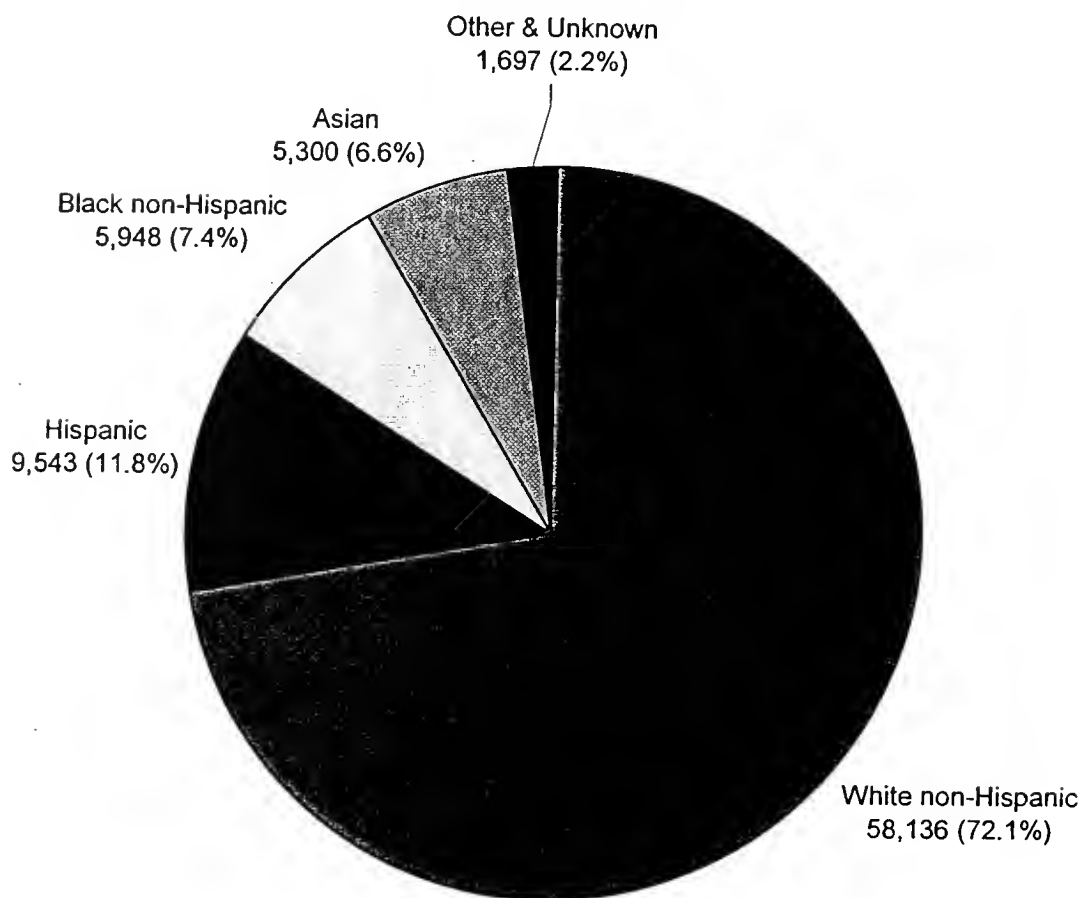
Table B-2B. Birth Characteristics by Maternal Ancestry, Massachusetts: 2002

Maternal Ancestry	Births <sup>1</sup>		Teen Births				Birthweight				Prenatal Care				Caesarean Section				Breastfeeding <sup>8</sup>			
			<18 Years		>20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>		Adequate <sup>4</sup>		1st Trimester		Section		n		n		n	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
State Total	80,624	100.0	1,571	1.9	4,715	5.8	1,109	1.4	6,060	7.5	67,784	84.7	67,457	84.2	22,553	28.1	60,266		60,266		76.1	
Puerto Rican	4,487	5.6	432	9.6	1,053	23.5	88	2.0	455	10.2	3,469	77.9	3,321	74.4	1,022	22.9	3,096		3,096		69.4	
Dominican	1,760	2.2	75	4.3	207	11.8	38	2.2	136	7.7	1,462	83.4	1,412	80.5	508	28.9	1,586		1,586		90.3	
Salvadoran	853	1.1	27	3.2	82	9.6	7	0.8	40	4.7	655	77.4	580	68.2	159	18.7	796		796		93.3	
Other Central American	842	1.0	30	3.6	97	11.5	11	1.3	53	6.3	641	76.6	610	72.6	189	22.5	769		769		91.3	
Other Hispanic <sup>7</sup>	1,601	2.0	43	2.7	118	7.4	18	1.1	108	6.8	1,264	79.4	1,232	77.2	447	28.0	1,455		1,455		91.1	
Chinese	1,478	1.8	5	0.3	17	1.2	18	1.2	96	6.5	1,296	88.0	1,225	83.2	347	23.5	1,230		1,230		83.3	
Vietnamese	844	1.0	11	1.3	31	3.7	12	1.4	69	8.2	658	78.5	634	75.3	188	22.3	553		553		65.6	
Cambodian	575	0.7	55	9.6	106	18.4	12	2.1	55	9.6	358	62.4	314	54.7	79	13.8	293		293		51.0	
Asian Indian	1,165	1.4	0	0.0	3	-- <sup>6</sup>	15	1.3	99	8.5	997	85.7	978	84.1	342	29.4	1,116		1,116		95.9	
Other Asian/Pi <sup>8</sup>	1,326	1.6	10	0.8	47	3.5	16	1.2	110	8.3	1,089	82.3	1,059	80.0	350	26.5	1,155		1,155		87.5	
Cape Verdean	790	1.0	30	3.8	91	11.5	9	1.1	67	8.5	544	69.7	505	64.3	200	25.4	612		612		77.7	
Brazilian	1,518	1.9	30	2.0	104	6.9	9	0.6	101	6.7	1,218	80.2	1,187	78.2	575	37.9	1,428		1,428		94.1	
Other Portuguese	1,435	1.8	29	2.0	108	7.5	12	0.8	106	7.4	1,258	88.0	1,205	84.3	386	26.9	719		719		50.2	
Haitian	1,085	1.3	18	1.7	34	3.1	37	3.4	130	12.0	750	71.0	719	67.3	374	34.6	927		927		85.6	
W. Indian/Carib. <sup>9</sup>	636	0.8	8	1.3	43	6.8	22	3.5	74	11.6	483	77.4	455	72.7	192	30.3	546		546		86.4	
African-American	2,827	3.5	175	6.2	470	16.6	83	2.9	384	13.6	2,120	76.2	2,052	73.3	740	26.3	1,896		1,896		67.4	
African <sup>10</sup>	1,113	1.4	1	-- <sup>6</sup>	16	1.4	17	1.5	97	8.7	800	73.0	770	70.1	368	33.2	1,019		1,019		91.8	
Middle Eastern <sup>11</sup>	990	1.2	2	-- <sup>6</sup>	18	1.8	12	1.2	63	6.4	820	83.4	818	83.1	269	27.2	893		893		90.3	
Native American	266	0.3	12	4.5	31	11.7	3	-- <sup>6</sup>	20	7.5	212	80.0	210	79.2	86	32.5	184		184		69.4	
European	15,202	18.9	47	0.3	250	1.6	155	1.0	880	5.8	13,342	88.3	13,303	87.9	4,500	29.7	12,406		12,406		82.6	

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the first category, "Births", percentages are based on column total (state total of births, including births for which maternal ancestry is unknown and other). For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Beginning with last year's publication, the Adequacy of Prenatal Care Utilization Index has replaced the Kessner Index as the measure of adequate prenatal care. 5. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 6. Calculations based on fewer than five events are excluded. 7. Other Hispanic includes Mexican, Cuban, Colombian, and Other South American. 8. Other Asian and Pacific Islander includes Korean, Filipino, Japanese, Laotian, Thai, Pakistani, and Hawaiian. 9. West Indian and Caribbean include Jamaican and Barbadian. 10. African includes Nigerian and other African. 11. Middle Eastern includes Lebanese, Iranian, Israeli and Other Middle Eastern.

Figure B-2. Resident Live Births by Mother's Race/Ethnicity: 2002



**Figure B-3. Resident Live Birth by Mother's Age: 2002**

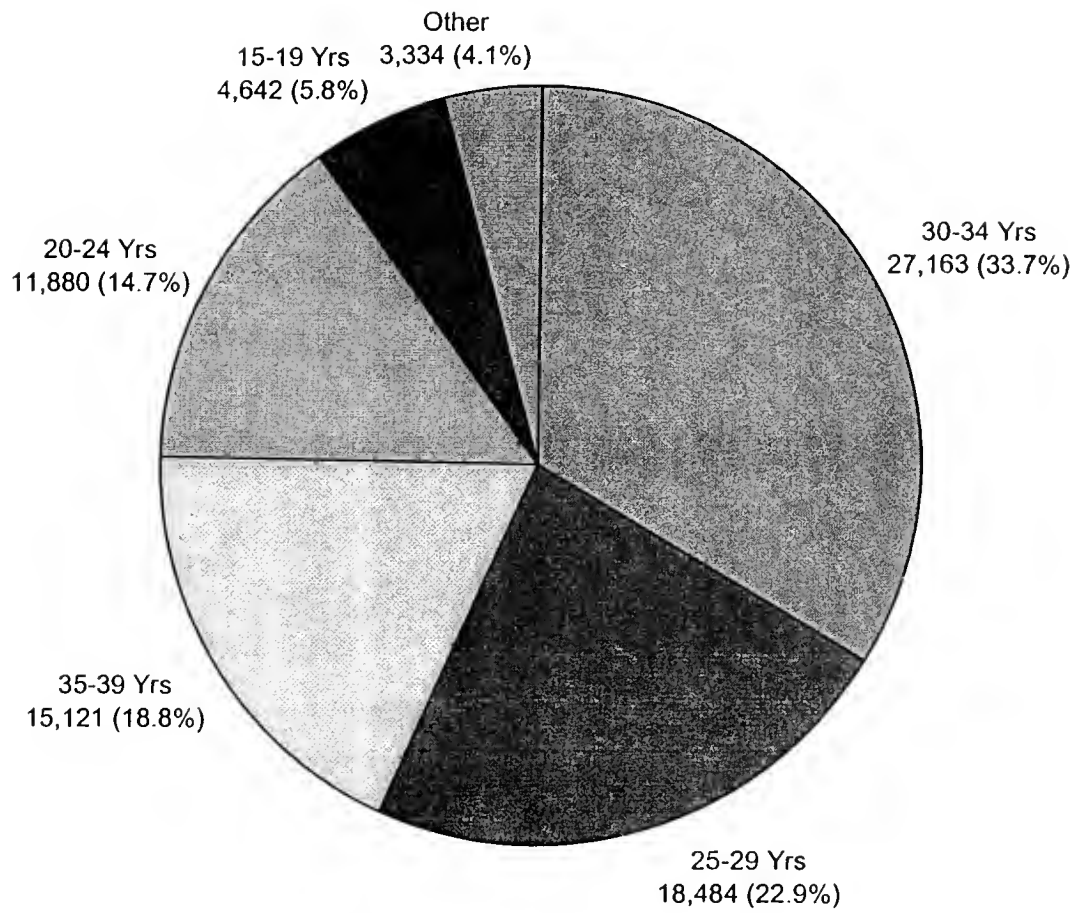


Table B-3A. Resident Birth Characteristics, 30 Largest Municipalities<sup>1</sup>, Massachusetts: 2002

Municipality	Rank (by pop. size)	Population	Crude Birth Rate <sup>2</sup>	Mother's Race and Ethnicity				Asian or Other <sup>4</sup>	Very Low Birthweight (<1500 g)	Low Birthweight (<2500 g)
				White non- Hispanic	Black non- Hispanic	Hispanic	% <sup>3</sup>			
				% <sup>3</sup>	% <sup>3</sup>	% <sup>3</sup>	%		%	%
<b>STATE TOTAL</b>		<b>6,349,097</b>	<b>12.7</b>	<b>72.1</b>	<b>7.4</b>	<b>11.8</b>	<b>8.5</b>	<b>1.4</b>		<b>7.5</b>
Arlington	29	42,389	12.9	82.2	1.5	2.6	13.4	0.9		5.9
Attleboro	30	42,068	15.2	83.0	2.8	6.6	7.6	0.9		7.2
Barnstable	25	47,821	9.2	84.6	2.5	5.0	7.7	0.5		7.7
Boston	1	589,141	13.6	35.1	30.1	22.9	11.9	2.1		9.5
Brockton	6	94,304	16.3	41.2	31.2	11.5	15.9	1.7		9.7
Brookline	17	57,107	11.4	72.6	2.2	4.3	20.8	1.2		9.3
Cambridge	5	101,355	10.6	57.0	17.6	8.3	16.8	1.6		7.0
Chicopee	21	54,653	11.7	77.6	3.3	16.4	2.7	1.3		8.6
Fall River	8	91,938	12.9	81.5	5.5	7.3	5.5	1.7		9.1
Frammingham	14	66,910	14.0	66.6	4.3	15.3	13.8	1.1		9.8
Haverhill	16	58,969	14.4	80.3	3.2	12.1	4.4	1.7		8.4
Lawrence	13	72,043	20.0	19.0	1.9	74.3	4.7	1.5		7.5
Lowell	4	105,167	17.0	47.5	6.7	17.0	28.6	1.8		7.9
Lynn	9	89,050	16.4	40.1	12.6	36.2	11.1	1.4		8.0
Malden	18	56,340	14.4	53.9	12.4	7.4	26.2	1.5		7.1
Medford	20	55,765	11.5	76.1	9.1	4.2	10.6	1.3		7.3
Methuen	28	43,789	13.3	77.2	2.2	15.4	5.1	1.5		8.6
New Bedford	7	93,768	14.1	64.4	7.7	17.8	9.5	1.9		7.8
Newton	11	83,829	9.8	80.9	1.3	3.2	14.6	1.1		6.8
Peabody	24	48,129	10.7	85.2	2.3	7.4	5.1	1.2		8.9
Pittsfield	27	45,793	11.5	86.2	5.3	5.1	3.4	2.5		9.7
Plymouth	23	51,701	13.8	93.3	1.7	1.7	3.2	1.1		8.1
Quincy	10	88,025	13.1	64.6	4.2	2.7	28.4	1.2		6.3
Revere	26	47,283	13.7	61.2	4.6	22.2	11.9	1.2		7.7
Somerville	12	77,478	11.7	59.9	10.7	17.1	12.3	1.5		7.6
Springfield	3	152,082	15.5	33.4	20.8	42.1	3.7	2.2		10.8
Taunton	19	56,976	13.4	83.9	4.4	6.4	5.2	1.5		7.6
Waltham	15	59,226	11.3	61.9	7.1	16.4	14.6	1.5		7.0
Weymouth	22	53,988	13.0	87.7	3.8	1.9	6.1	0.9		7.8
Worcester	2	172,648	15.2	55.0	11.7	22.3	10.9	1.6		7.5

Table B-3A(continued). Resident Birth Characteristics, 30 Largest Municipalities<sup>1</sup>, Massachusetts: 2002

Municipality	Birth			Teen Mothers			Deaths		
	Adequate Prenatal Care <sup>6</sup> %	Public Payment <sup>7</sup> for Prenatal Care %	Unmarried %	15 to 19 years n	Rate <sup>2</sup> %	Mortality Rate <sup>8</sup> 2002	Infant Mortality Rate <sup>8</sup> 2000-2002	Neonatal Mortality Rate <sup>8</sup> 2000-2002	
STATE TOTAL	84.7	28.5	26.8	4,642	22.6	4.9	4.8	3.7	3.7
Arlington	91.0	5.0	7.7	5	6.5	5	5	5	5
Attleboro	78.2	23.2	22.5	32	27.8	5	2.6	5	2.6
Barnstable	87.1	39.9	27.4	35	27.2	5	6.4	5	3.5
Boston	83.3	48.0	44.1	664	29.9	7.0	7.0	5.1	5.3
Brockton	74.7	56.9	51.0	163	49.3	5.9	5.6	5.9	4.5
Brookline	94.1	6.5	6.2	5	3.6	7.7	7.7	7.7	2.7
Cambridge	88.2	16.2	16.8	24	6.4	6.5	4.8	4.7	2.5
Chicopee	81.8	47.6	44.6	60	33.2	5	4.4	5	3.8
Fall River	85.1	61.4	50.9	158	54.2	6.7	8.0	6.7	7.5
Framingham	89.2	27.5	18.6	41	21.3	5.3	6.5	5	5.4
Haverhill	89.7	28.4	30.2	67	37.4	10.6	5.8	9.4	5.4
Lawrence	86.9	63.8	62.6	227	79.7	5.6	8.0	3.5	5.7
Lowell	68.6	50.5	46.3	228	58.3	10.1	7.0	6.1	5.3
Lynn	79.2	57.4	44.5	162	54.2	6.2	6.7	5.5	5.3
Malden	83.5	35.1	22.5	25	18.0	5	3.7	5	2.1
Medford	90.8	19.5	19.4	10	5.7	5	3.2	5	3.2
Methuen	87.8	22.8	25.3	26	20.6	5	5.8	5	5.8
New Bedford	76.9	60.4	57.7	175	58.8	7.6	6.6	5	3.3
Newton	91.0	4.8	4.4	9	2.6	5	3.9	5	2.8
Peabody	85.9	20.9	16.7	10	7.7	5	6.8	0.0	4.9
Pittsfield	54.6	46.1	44.5	61	44.8	5	4.7	0.0	5
Plymouth	79.4	16.8	14.3	22	14.0	5	4.3	5	2.4
Quincy	89.7	25.7	17.9	31	15.9	5.2	4.4	5	3.5
Revere	84.5	43.0	33.4	51	42.0	5	4.1	5	3.6
Somerville	81.8	32.5	26.1	50	24.0	5	3.7	5	3.0
Springfield	73.5	66.7	64.3	423	70.1	9.8	7.3	6.8	4.4
Taunton	80.4	36.4	37.6	57	34.5	8.0	7.3	6.6	5.6
Waltham	83.5	23.1	21.9	24	10.7	5	4.4	5	2.9
Weymouth	91.4	16.3	16.1	21	15.8	5	3.2	5	3.2
Worcester	77.6	39.9	42.1	226	32.7	8.8	8.9	6.1	6.6

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to DPH 2000 population estimates, based on U.S. Census 2000 population counts. 2. Crude birth rates represent the number of births per 1,000 residents; teen birth rates refer to the number of births per 1,000 females ages 15-19. 2002 birth rates are calculated using the DPH 2000 population estimates. 3. For the category of Mother's Race and Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Mothers who designated themselves as Asian, American Indian or Other. 5. Calculations based on fewer than 5 events are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Please see Section Definitions for an explanation. 7. Public payment sources include Commonwealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Deaths per 1,000 live births. See Definitions of Rates section in Section Definitions for an explanation of infant and neonatal mortality rates.

Table B-3B: Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 2002

CHNA	Population	Crude Birth Rate <sup>1</sup>	Mother's Race and Ethnicity					Very Low Birthweight (<1500 g) %	Low Birthweight (<2500 g) %
			White non-Hispanic % <sup>3</sup>	Black non-Hispanic % <sup>3</sup>	Hispanic % <sup>3</sup>	Asian or Other <sup>2</sup> % <sup>3</sup>			
STATE TOTAL	6,349,097	12.7	72.1	7.4	11.8	8.5	1.4	7.5	
Community Health Network of Berkshire County									
Upper Valley Health Web (Franklin County)	134,953	9.2	89.7	2.9	4.2	3.1	1.9	7.6	
Partnership for Health in Hampshire County (Northampton)	86,889	9.3	91.7	1.2	3.9	2.6	1.4	6.9	
The Community Health Connection (Springfield)	150,077	8.5	86.3	1.3	6.3	5.9	1.7	5.9	
Community Health Network of Southern Worcester County	291,665	12.9	55.0	13.5	27.8	3.7	1.9	9.3	
Community Partners for Health (Milford)	113,702	12.3	88.2	1.4	8.0	2.1	1.2	7.6	
Community Health Network of Greater Metro West (Framingham)	152,117	15.6	92.9	1.1	2.5	3.5	1.2	7.2	
Community Wellness Coalition (Worcester)	374,478	14.1	83.4	1.6	5.6	9.2	1.3	7.3	
Fitchburg/Gardner Community Health Network	289,834	13.9	66.3	8.1	15.2	10.4	1.3	6.7	
Greater Lowell Community Health Network	250,362	12.6	82.1	2.9	10.8	4.0	1.1	7.0	
Greater Lawrence Community Health Network	270,083	14.6	69.9	3.5	8.5	18.1	1.3	7.4	
Greater Haverhill Community Health Network	182,025	15.3	50.1	1.6	42.3	5.9	1.3	6.7	
Community Health Network North (Beverly/Gloucester)	144,275	13.7	89.2	1.8	6.1	2.9	1.5	8.4	
North Shore Community Health Network	118,280	10.7	91.5	0.7	3.5	4.2	0.4	6.3	
Greater Woburn/Concord/Littleton Community Health Network	278,839	12.7	67.8	6.1	19.0	7.1	1.3	7.6	
North Suburban Health Alliance (Medford/Malden/Melrose)	208,406	11.9	81.1	2.2	2.7	13.7	1.1	6.6	
Greater Cambridge/Somerville Community Health Network	261,844	13.1	75.9	6.6	6.7	10.8	1.3	7.5	
West Suburban Health Network (Newton/Waltham)	278,402	11.3	67.5	9.7	8.9	13.7	1.3	6.9	
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	253,187	11.2	80.9	2.6	5.8	10.7	1.1	6.2	
Blue Hills Community Health Alliance (Greater Quincy)	746,914	13.5	39.2	24.7	24.1	11.9	1.8	9.0	
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	365,457	12.9	77.8	5.9	2.3	13.6	1.3	7.1	
Greater Brockton Community Health Network	159,254	12.1	67.5	2.6	27.7	2.1	1.4	8.4	
South Shore Community Partners in Prevention (Plymouth)	232,260	13.6	65.8	17.3	6.7	9.9	1.6	8.7	
Greater Attleboro-Taunton Health & Education Response	180,609	13.5	95.3	1.1	0.9	2.6	0.9	6.6	
Partners for a Healthier Community (Fall River)	242,659	13.8	90.0	2.2	3.2	4.4	1.1	6.8	
Greater New Bedford Health & Human Services Coalition	140,256	11.2	85.3	4.1	5.8	4.6	1.5	9.1	
Cape and Islands Community Health Network	195,533	12.0	76.6	5.5	10.4	7.2	1.3	7.2	
	246,737	9.3	88.0	2.8	3.4	5.5	1.4	6.5	



Table B-3B(continued). Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 2002

CHNA	Births				Deaths				
	Adequate Prenatal Care <sup>6</sup> %	Public Payment <sup>7</sup> for Prenatal Care %	Unmarried %	Teen Mothers 15 to 19 years n	Rate <sup>4</sup>	Infant Mortality Rate <sup>8</sup> 2002	Infant Mortality Rate <sup>8</sup> 2000-2002	Neonatal Mortality Rate <sup>8</sup> 2002	Neonatal Mortality Rate <sup>8</sup> 2000-2002
STATE TOTAL	84.7	28.5	26.8	4,642	22.6	4.9	4.8	3.7	3.7
Community Health Network of Berkshire County	65.4	42.2	40.3	126	26.7	5.6	4.1	4.0	2.2
Upper Valley Health Web (Franklin County)	83.6	37.7	34.6	73	25.5	0.0	2.7	0.0	2.3
Partnership for Health in Hampshire County (Northampton)	88.0	23.8	27.3	49	5.4	7.0	5.0	4.7	3.7
The Community Health Connection (Springfield)	78.6	50.1	46.9	467	44.4	8.8	5.9	5.9	3.7
Community Health Network of Southern Worcester County	83.8	27.3	30.3	88	24.0	5.7	4.0	4.3	2.6
Community Partners for Health (Milford)	89.9	10.9	12.6	65	14.4	5.5	5.8	4.6	4.8
Community Health Network of Greater Metro West (Frammingham)	89.4	12.0	10.5	117	11.8	3.6	4.4	2.8	3.8
Community Wellness Coalition (Worcester)	78.8	28.8	31.5	261	25.2	7.5	7.0	5.7	5.4
Fitchburg/Gardner Community Health Network	83.1	26.6	27.8	208	25.4	4.8	4.2	3.2	2.9
Greater Lowell Community Health Network	77.2	27.8	27.7	273	31.8	5.3	4.5	3.3	3.4
Greater Lawrence Community Health Network	88.2	38.8	39.2	258	41.3	3.9	5.7	2.9	4.5
Greater Haverhill Community Health Network	91.7	18.2	20.5	91	21.6	7.1	4.5	6.1	3.6
Community Health Network North (Beverly/Gloucester)	91.8	18.5	15.4	37	9.9	-- <sup>5</sup>	3.1	-- <sup>5</sup>	2.4
North Shore Community Health Network	83.4	33.5	28.3	212	25.6	3.9	5.1	3.1	4.0
Greater Woburn/Concord/Littleton Community Health Network	87.6	6.3	6.8	22	4.1	2.4	2.8	-- <sup>5</sup>	2.1
North Suburban Health Alliance (Medford/Malden/Melrose)	87.8	21.2	16.3	77	11.1	2.6	3.0	2.0	2.3
Greater Cambridge/Somerville Community Health Network	87.4	18.0	16.0	87	11.0	3.8	4.4	2.5	3.0
West Suburban Health Network (Newton/Waltham)	89.3	9.1	8.6	42	4.3	2.8	2.9	2.8	2.1
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	84.0	45.2	41.1	814	30.9	6.5	6.3	4.8	4.8
Blue Hills Community Health Alliance (Greater Quincy)	91.5	15.3	13.7	101	10.5	4.2	3.2	3.6	2.7
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	82.1	50.2	46.5	226	38.4	5.2	5.4	5.2	4.4
Greater Brockton Community Health Network	82.3	34.8	33.9	207	25.0	4.1	4.9	3.8	4.2
South Shore Community Health Network	87.9	13.4	12.8	58	10.3	-- <sup>5</sup>	3.1	-- <sup>5</sup>	2.0
South Shore Community Partners in Prevention (Plymouth)	81.7	21.1	21.1	148	19.4	4.5	4.4	4.2	3.7
Greater Attleboro-Taunton Health & Education Response	86.6	53.5	42.7	173	39.0	6.3	7.9	6.3	7.3
Partners for a Healthier Community (Fall River)	76.8	44.6	43.7	237	36.3	6.0	6.0	3.0	3.4
Greater New Bedford Health & Human Services Coalition	86.3	32.6	24.0	125	20.3	5.2	5.8	3.5	4.2
Cape and Islands Community Health Network									

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births per 1,000 residents (male and female). 2002 birth rates are calculated using DPH 2000 population estimates, based on U.S. Census 2000 population counts. 2. Mothers who designated themselves as Asian, American Indian or Other. 3. For the category of Mother's Race and Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Births per 1,000 female residents ages 15-19. 5. Calculations based on fewer than 5 events are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Please see Glossary for definition. 7. Public payment sources include Commonwealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Deaths per 1,000 live births. See Definitions of Rates section in Section Definitions for explanation of infant and neonatal mortality rates.

**Table B-4. Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 2002**

Mother's Age	1990		2002		Percent Change in Rate
	Births <sup>1</sup>	Rate	Births	Rate <sup>2</sup>	
12-14	124	1.3	73	0.6	-53.8
15-19	7,258	35.8	4,642	22.6	-36.9
20-24	18,115	70.5	11,880	57.8	-18.0
25-29	29,913	107.5	18,484	83.8	-22.0
30-34	25,687	92.1	27,163	108.5	17.8
35-39	9,795	40.1	15,121	55.2	37.7
40-44	1,522	6.9	3,085	11.6	68.1
45+ <sup>3</sup>	46	0.3	175	0.7	133.3
Birth rate, ages 15-44 <sup>4</sup>	92,290	62.2	80,375	56.5	-9.2
Crude Birth Rate <sup>5</sup>	92,461	15.4	80,624	12.7	-17.5

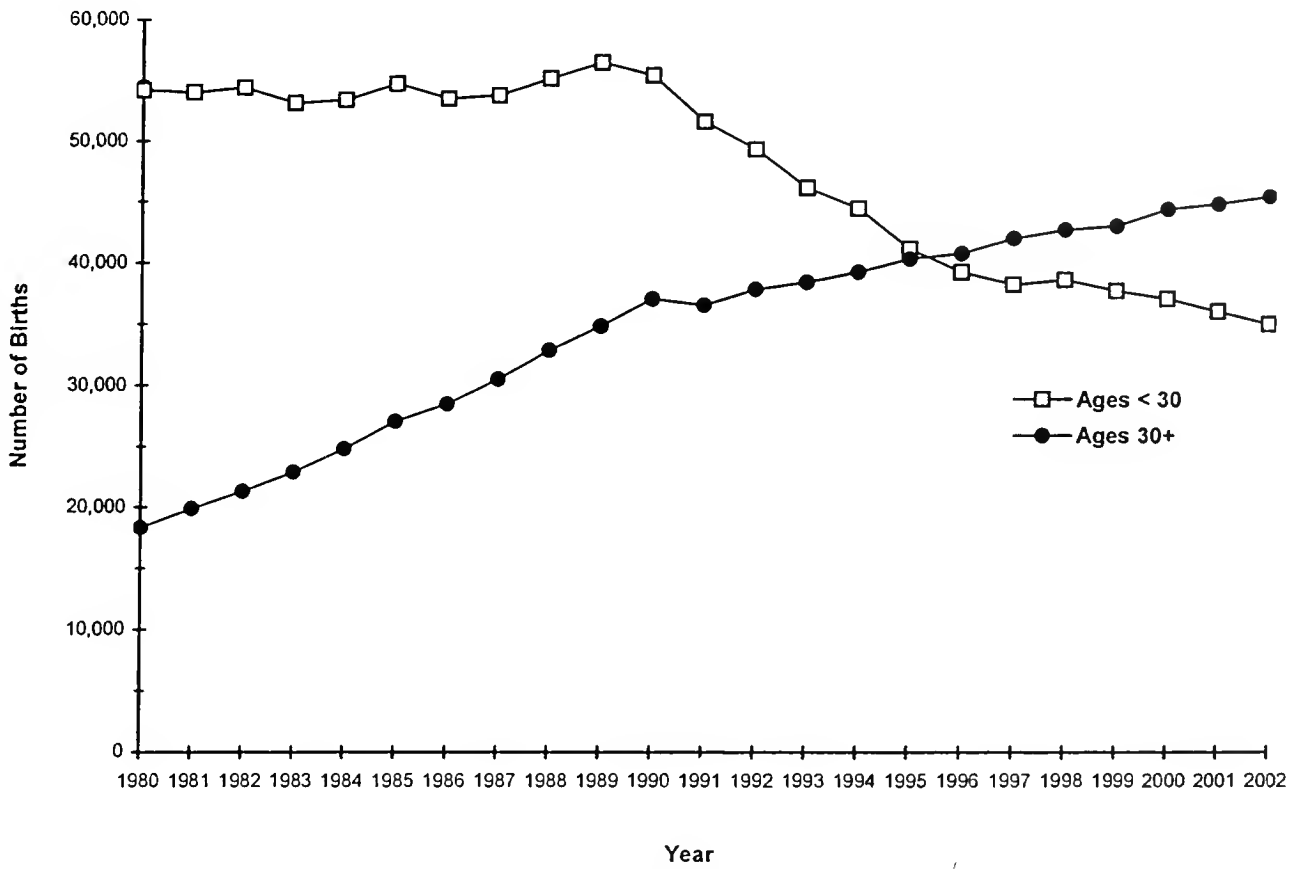
NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Differences in the number of births from previous publications are the result of updated of the birth files. The number of births for all age groups does not always add to the total number of births as mother's age is sometimes not recorded on the birth certificate.

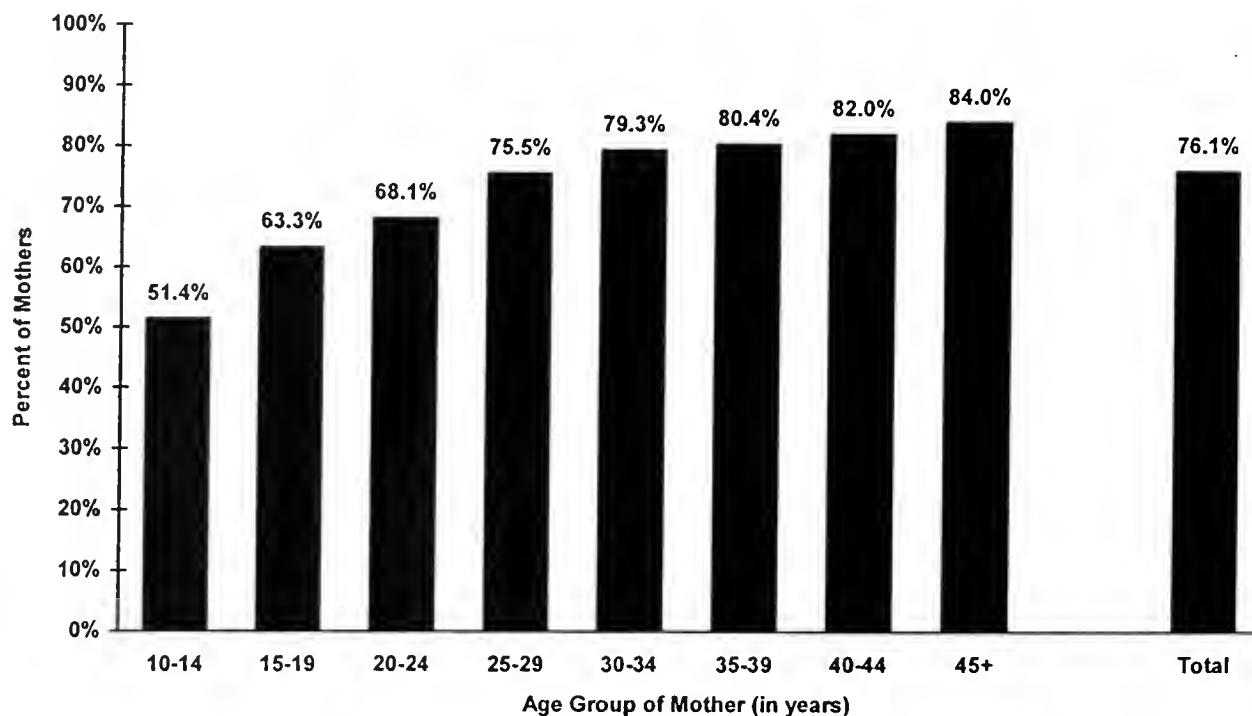
2. 2002 birth rates are calculated using DPH 2000 population estimates, based on U.S. Census 2000 population counts.

3. Denominator is female population ages 45-49. 4. Rate represents the total number of births to women ages 15-44 per 1,000 women ages 15 to 44. 5. Births per 1,000 residents (females and males). Includes births to mothers of all age groups and mothers for whom age is unknown.

**Figure B-4. Trends in the Number of Births by Mother's Age Group,  
Massachusetts: 1980-2002**



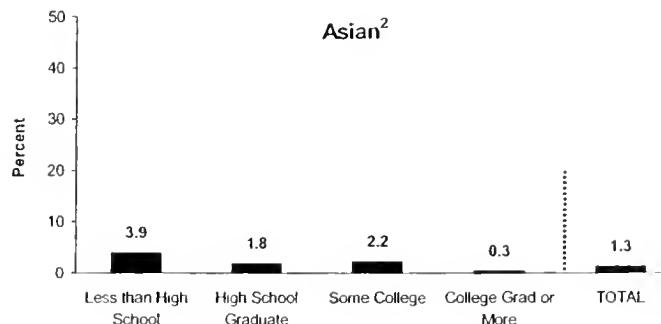
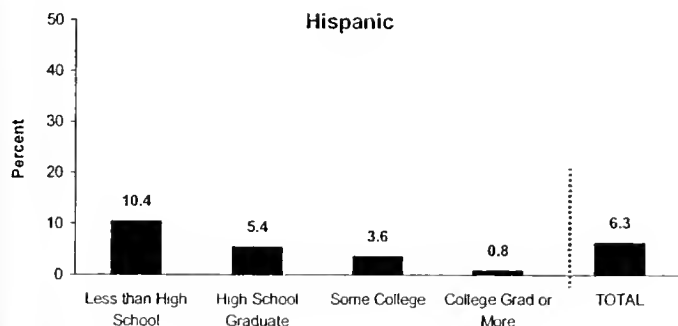
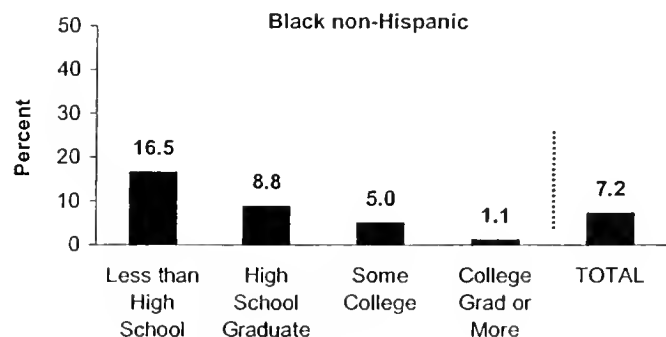
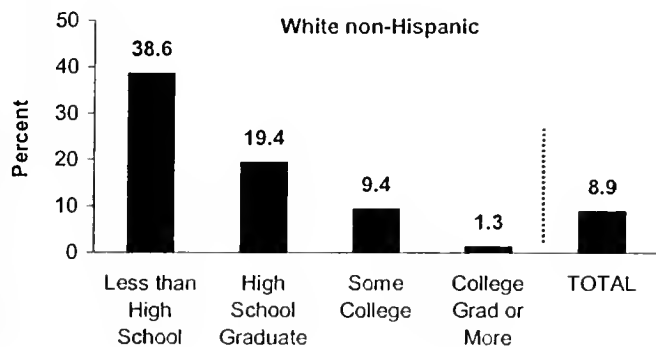
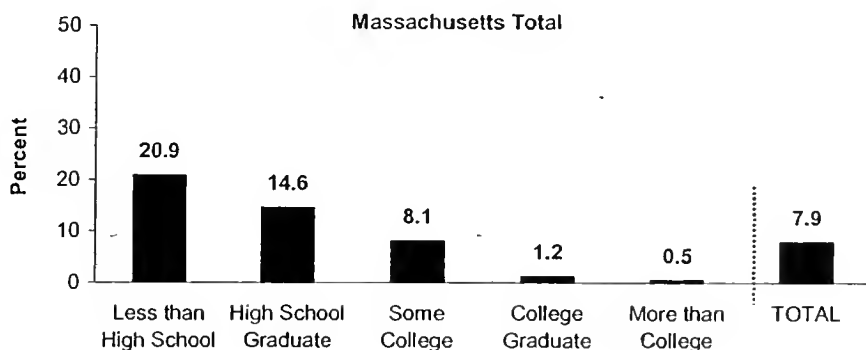
**Figure B-5. Percent of Mothers Breastfeeding or Intending to Breastfeed<sup>1</sup> by Age Group, Massachusetts : 2002**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Information about breastfeeding was reported by the mother at the time the birth certificate was completed.

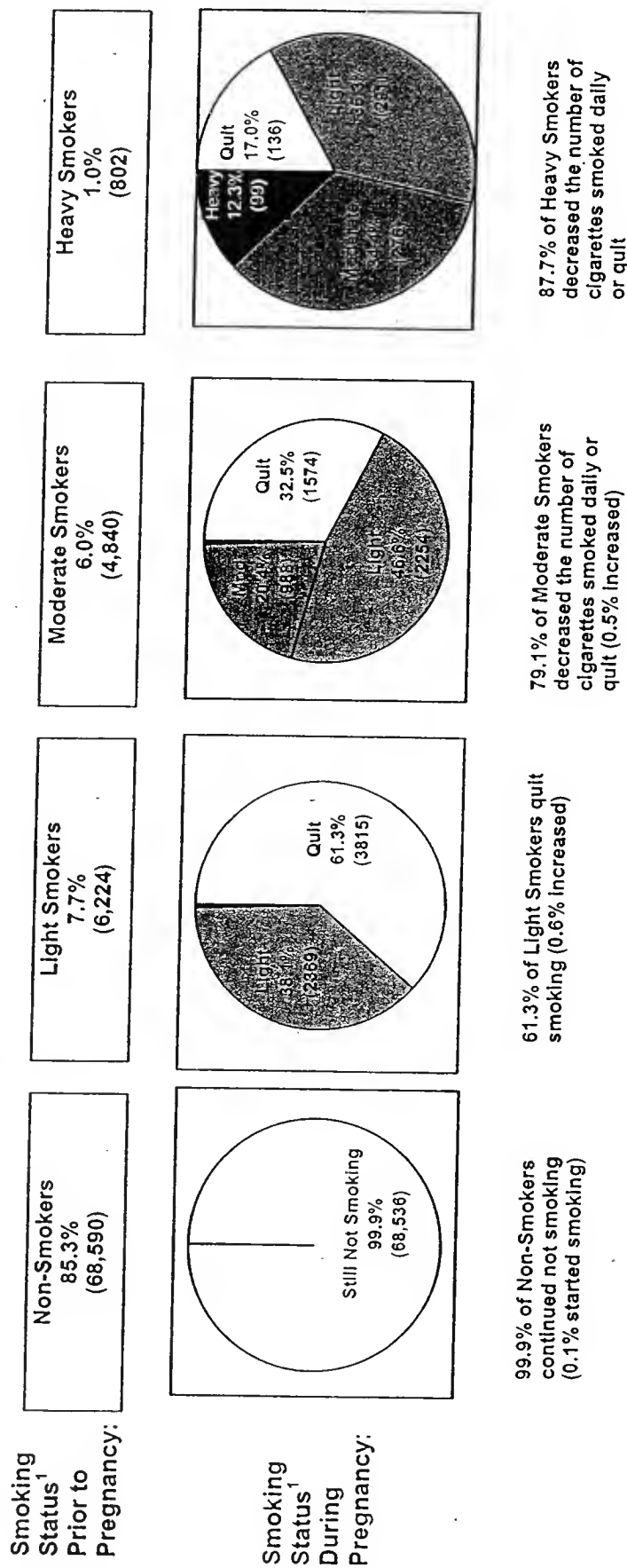
**Figure B-6. Percent of Mothers who Smoked During Pregnancy<sup>1</sup>,  
by Mother's Race/Hispanic Ethnicity and Educational Attainment,  
Massachusetts: 2002**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on information provided on the birth certificate as reported by the mother. Due to self-reported nature, data on smoking prevalence should be interpreted cautiously. Mothers with more than one delivery are counted for each birth. 2. Caution should be used with Asian data because of small numbers.

Figure B-7. Distribution of Smoking Status<sup>1</sup> During Pregnancy by Smoking Status Prior to Pregnancy, Massachusetts: 2002



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Light Smokers=1-10 cigarettes daily; Moderate Smokers=11-20 cigarettes daily; Heavy Smokers=21 cigarettes or more daily.

**Table B-5A. Parity<sup>1</sup> by Age of Mother, Massachusetts: 2002**

Age of Mother (years)		Total Births	1st	2nd	3rd	4th	5th+
STATE TOTAL	n <sup>2</sup>	80,624	34,911	28,117	11,695	3,777	1,967
	% <sup>3</sup>	100.0	43.4	34.9	14.5	4.7	2.4
10-14	n	73	73	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0
15-19	n	4,642	3,872	677	82	4	0
	%	100.0	83.5	14.6	1.8	— <sup>4</sup>	0.0
20-24	n	11,880	6,580	3,724	1,148	324	80
	%	100.0	55.5	31.4	9.7	2.7	0.7
25-29	n	18,484	8,869	6,037	2,426	751	362
	%	100.0	48.1	32.7	13.2	4.1	2.0
30-34	n	27,163	10,397	10,693	4,145	1,244	632
	%	100.0	38.3	39.4	15.3	4.6	2.3
35-39	n	15,121	4,199	5,826	3,248	1,202	622
	%	100.0	27.8	38.6	21.5	8.0	4.1
40-44	n	3,085	863	1,106	617	237	254
	%	100.0	28.0	35.9	20.1	7.7	8.3
45+	n	175	58	54	29	15	17
	%	100.0	33.5	31.2	16.8	8.7	9.8

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The number of live births including this birth. 2. State totals include births of unknown parity and unknown mother's age. 3. Percents may not sum to 100.0 due to rounding. 4. Calculations based on fewer than 5 events are excluded

**Table B-5B. Trends in Number and Percent Distribution of Births<sup>1</sup> by Plurality and Age, Massachusetts: 1990-2002**

Age Group Year		Singletons		Multiples <sup>2</sup>						Total births	
		n	%	Twins		Triplets or more		Total Multiples		n	%
				n	%	n	%	n	%		
<b>All Ages</b>											
1990		90,049	97.4	2,312	2.5	99	0.1	2,411	2.6	92,460	100.0
1991		85,802	97.3	2,285	2.6	89	0.1	2,374	2.7	88,176	100.0
1992		84,722	97.2	2,347	2.7	133	0.2	2,480	2.8	87,202	100.0
1993		82,055	97.0	2,367	2.8	205	0.2	2,572	3.0	84,627	100.0
1994		81,187	96.9	2,357	2.8	214	0.3	2,571	3.1	83,758	100.0
1995		78,935	96.8	2,429	3.0	198	0.2	2,627	3.2	81,562	100.0
1996		77,355	96.5	2,621	3.3	194	0.2	2,815	3.5	80,164	100.0
1997		77,203	96.1	2,856	3.6	262	0.3	3,118	3.9	80,321	100.0
1998		78,004	95.8	3,114	3.8	288	0.4	3,402	4.2	81,406	100.0
1999		77,473	95.8	3,147	3.9	246	0.3	3,393	4.2	80,866	100.0
2000		78,075	95.7	3,263	4.0	244	0.3	3,507	4.3	81,582	100.0
2001		77,409	95.6	3,371	4.2	234	0.3	3,605	4.4	81,014	100.0
2002		76,673	95.1	3,708	4.6	243	0.3	3,951	4.9	80,624	100.0
<b>Ages &lt;35</b>											
1990		79,081	97.5	1,946	2.4	70	0.1	2,016	2.5	81,097	100.0
1991		74,810	97.5	1,863	2.4	76	0.1	1,939	2.5	76,749	100.0
1992		73,043	97.3	1,914	2.6	103	0.1	2,017	2.7	75,060	100.0
1993		70,042	97.2	1,849	2.6	158	0.2	2,007	2.8	72,049	100.0
1994		68,644	97.2	1,844	2.6	164	0.2	2,008	2.8	70,652	100.0
1995		65,669	97.2	1,787	2.6	141	0.2	1,928	2.9	67,597	100.0
1996		63,560	96.9	1,935	2.9	126	0.2	2,061	3.1	65,621	100.0
1997		62,598	96.7	1,949	3.0	170	0.3	2,119	3.3	64,717	100.0
1998		62,719	96.4	2,193	3.4	170	0.3	2,363	3.6	65,082	100.0
1999		61,816	96.4	2,147	3.3	150	0.2	2,297	3.6	64,113	100.0
2000		61,659	96.4	2,205	3.4	130	0.2	2,335	3.6	63,994	100.0
2001		60,704	96.3	2,211	3.5	134	0.2	2,345	3.7	63,049	100.0
2002		59,736	96.0	2,379	3.8	127	0.2	2,506	4.0	62,242	100.0
<b>Ages 35+</b>											
1990		10,968	96.5	366	3.2	29	0.3	395	3.5	11,363	100.0
1991		10,987	96.2	422	3.7	13	0.1	435	3.8	11,422	100.0
1992		11,675	96.2	433	3.6	30	0.3	463	3.8	12,138	100.0
1993		12,007	95.5	518	4.1	47	0.4	565	4.5	12,572	100.0
1994		12,543	95.7	513	3.9	50	0.4	563	4.3	13,106	100.0
1995		13,264	95.0	642	4.6	57	0.4	699	5.0	13,963	100.0
1996		13,793	94.8	686	4.7	68	0.5	754	5.2	14,547	100.0
1997		14,602	93.6	907	5.8	92	0.6	999	6.4	15,601	100.0
1998		15,282	93.6	921	5.6	118	0.7	1,039	6.4	16,321	100.0
1999		15,657	93.5	1,000	6.0	96	0.6	1,096	6.5	16,753	100.0
2000		16,412	93.3	1,058	6.0	114	0.6	1,172	6.7	17,584	100.0
2001		16,703	93.0	1,160	6.5	100	0.6	1,260	7.0	17,963	100.0
2002		16,936	92.1	1,329	7.2	116	0.6	1,445	7.9	18,381	100.0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Differences in the number of births from previous publications are the result of updated of files. 2. Numbers of multiples (n) represent individual infants rather than sets of infants.



**Table B-6. Resident Births By Mother's Age, Marital Status, and Race/Hispanic Ethnicity  
Massachusetts: 2002**

Age of Mother	Marital Status		White	Black				
		Total	non-Hisp.	non-Hisp.	Hispanic	Asian	Other	Unknown
Grand Total		80,598	58,124	5,948	9,543	5,300	1,576	107
Total Married		58,995	47,250	2,551	3,662	4,542	908	82
Total Unmarried		21,603	10,874	3,397	5,881	758	668	25
<19	Total	2,877	1,204	414	1,036	128	92	3
	Married	174	80	6	71	11	6	0
	Unmarried	2,703	1,124	408	965	117	86	3
19	Total	1,838	963	216	521	78	59	1
	Married	242	137	13	67	11	14	0
	Unmarried	1,596	826	203	454	67	45	1
20-24	Total	11,876	6,593	1,304	2,941	634	395	9
	Married	4,204	2,589	246	800	404	161	4
	Unmarried	7,672	4,004	1,058	2,141	230	234	5
25-29	Total	18,477	12,642	1,475	2,418	1,506	414	22
	Married	13,759	10,340	678	1,101	1,363	260	17
	Unmarried	4,718	2,302	797	1,317	143	154	5
30-34	Total	27,157	21,671	1,446	1,685	1,948	368	39
	Married	24,258	20,190	901	1,030	1,824	281	32
	Unmarried	2,899	1,481	545	655	124	87	7
35-39	Total	15,116	12,409	849	781	842	210	25
	Married	13,527	11,539	537	487	782	159	23
	Unmarried	1,589	870	312	294	60	51	2
40+	Total	3,257	2,642	244	161	164	38	8
	Married	2,831	2,375	170	106	147	27	6
	Unmarried	426	267	74	55	17	11	2

Table does not include 26 births to mothers of unknown status.

Table B-7. Resident Births to Teenage Mothers: 1970-2002

Year	Total Births	Age of Mother							Total 12-19	% of Total Births
		<14	14	15	16	17	18	19		
1970	93,582	11	70	320	802	1,726	3,043	4,285	10,257	11.0%
1971	86,755	26	84	313	875	1,738	2,981	4,000	10,017	11.5%
1972	76,835	21	103	348	955	1,841	2,834	3,690	9,792	12.7%
1973	72,237	12	93	393	959	1,759	2,584	3,282	9,082	12.6%
1974	70,071	18	79	333	895	1,762	2,524	3,181	8,792	12.5%
1975	68,070	20	84	325	915	1,678	2,560	3,085	8,667	12.7%
1976	65,947	19	96	336	807	1,478	2,332	2,923	7,991	12.1%
1977	67,838	19	68	270	792	1,477	2,293	2,913	7,832	11.5%
1978	68,526	18	67	303	737	1,445	2,252	2,979	7,801	11.4%
1979	70,568	11	70	283	773	1,413	2,306	2,916	7,772	11.0%
1980	72,591	15	56	300	740	1,360	2,202	3,092	7,765	10.7%
1981	73,931	13	82	275	722	1,357	2,164	2,816	7,429	10.0%
1982	75,749	15	83	299	753	1,328	2,161	2,722	7,361	9.7%
1983	76,031	8	78	255	726	1,278	2,053	2,521	6,919	9.1%
1984	78,198	9	75	265	714	1,307	2,061	2,585	7,016	9.0%
1985	81,766	16	97	295	698	1,283	1,986	2,595	6,970	8.5%
1986	82,163	15	82	334	712	1,233	1,954	2,521	6,851	8.3%
1987	84,343	17	79	327	796	1,337	1,965	2,498	7,019	8.3%
1988	88,047	27	120	352	732	1,450	2,068	2,511	7,260	8.2%
1989	91,314	19	108	345	853	1,426	2,207	2,776	7,734	8.5%
1990	92,461	21	103	351	810	1,344	2,014	2,739	7,382	8.0%
1991	88,176	20	102	372	758	1,391	1,910	2,461	7,014	7.9%
1992	87,202	17	103	341	782	1,327	1,753	2,352	6,675	7.6%
1993	84,627	16	121	360	741	1,259	1,872	2,237	6,606	7.8%
1994	83,758	24	131	371	822	1,244	1,758	2,217	6,567	7.8%
1995	81,562	19	98	356	721	1,203	1,648	2,062	6,107	7.5%
1996	80,164	11	80	342	687	1,115	1,666	1,948	5,849	7.3%
1997	80,321	19	84	290	694	1,121	1,613	2,083	5,904	7.3%
1998	81,406	14	65	271	663	1,120	1,710	2,059	5,902	7.3%
1999	80,866	10	63	244	570	1,039	1,679	1,983	5,588	6.9%
2000	81,582	12	78	211	502	1,026	1,544	2,022	5,395	6.6%
2001	81,014	5	73	236	494	897	1,405	1,947	5,057	6.2%
2002	80,624	12	61	195	478	825	1,306	1,838	4,715	5.8%

**Table B-8. Births by Birthweight, Race and Hispanic Ethnicity, Massachusetts: 2002**

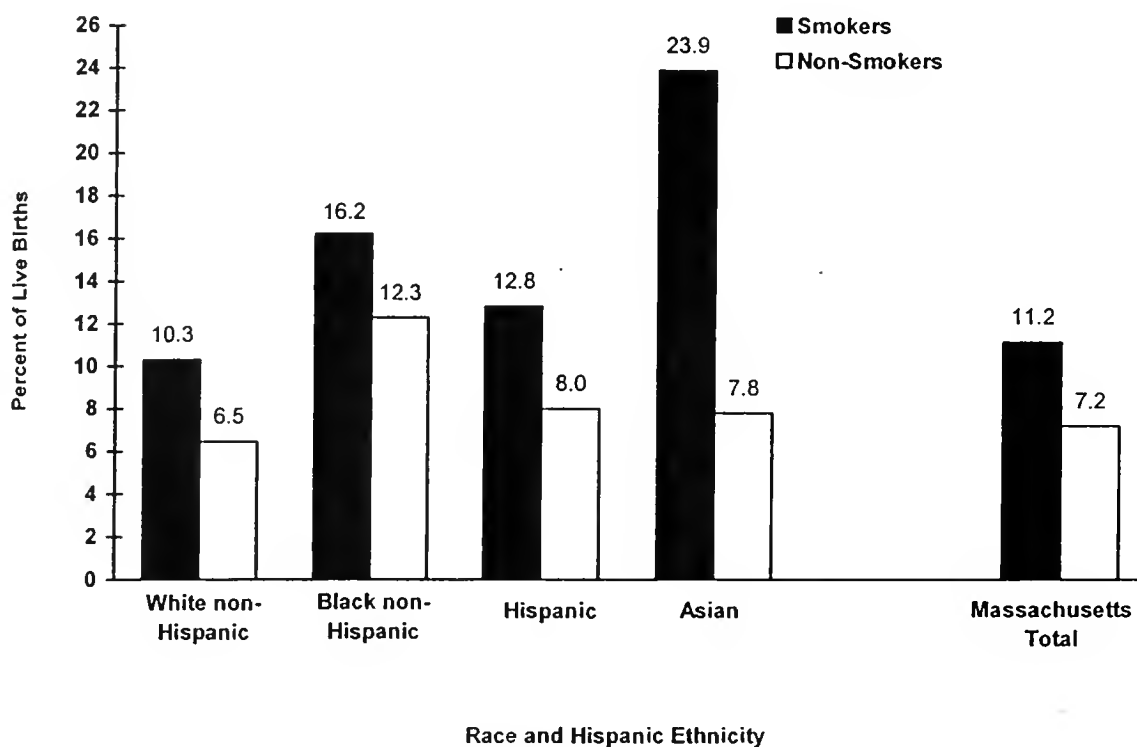
Birthweight (in grams)	Total		White non- Hispanic		Black non- Hispanic		Hispanic		Asian		Other		Unknown	
	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>
State Total	80,624	100.0	58,136	100.0	5,948	100.0	9,543	100.0	5,300	100.0	1,576	100.0	121	
<500	125	0.2	54	0.1	32	0.5	26	0.3	9	0.2	4	-- <sup>2</sup>	0	
500-999	417	0.5	238	0.4	80	1.3	63	0.7	25	0.5	10	0.6	1	
1000-1499	567	0.7	374	0.6	70	1.2	73	0.8	42	0.8	8	0.5	0	
1500-1999	1,207	1.5	831	1.4	134	2.3	143	1.5	66	1.2	31	2.0	2	
2000-2499	3,744	4.6	2,455	4.2	431	7.2	487	5.1	282	5.3	84	5.3	5	
2500-2999	12,091	15.0	7,676	13.2	1,233	20.7	1,735	18.2	1,162	21.9	273	17.3	12	
3000-3499	29,219	36.2	20,350	35.0	2,188	36.8	3,822	40.1	2,242	42.3	596	37.8	21	
3500-3999	24,184	30.0	18,770	32.3	1,347	22.6	2,421	25.4	1,187	22.4	432	27.4	27	
4000-4499	7,559	9.4	6,207	10.7	342	5.7	650	6.8	235	4.4	118	7.5	7	
4500-4999	1,255	1.6	1,011	1.7	75	1.3	105	1.1	44	0.8	14	0.9	6	
>=5000	129	0.2	107	0.2	6	0.1	9	0.1	5	0.1	2	-- <sup>2</sup>	0	
Unknown	127	0.2	63	0.1	10	0.2	9	0.1	1	-- <sup>2</sup>	4	-- <sup>2</sup>	40	
VLBW <sup>3</sup> (0-1,499 g)	1,109	1.4	666	1.1	182	3.1	162	1.7	76	1.4	22	1.4	1	
LBW <sup>4</sup> (0-2,499 g)	6,060	7.5	3,952	6.8	747	12.6	792	8.3	424	8.0	137	8.7	8	

NOTE: Percentages for detailed birthweight rows ("<500" through "Unknown") are calculated based on all births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweights only.

1. Percentages are based on column totals. 2. Calculations based on fewer than five events are excluded. 3. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.).

4. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

**Figure B-8. Low Birthweight<sup>1</sup> Among Smoking and Nonsmoking<sup>2</sup> Mothers, by Race and Hispanic Ethnicity, Massachusetts: 2002**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Maternal smoking is self-reported, usually following childbirth; these data should be interpreted cautiously.

1. Low birthweight: less than 2,500 grams or 5.5 pounds.

2. Based on information provided on the birth certificate by the mother.

**Table B-9. Low Birthweight (LBW)<sup>1</sup> by Maternal Age, Race and Hispanic Ethnicity, Massachusetts: 2002**

Mother's Age (in years)	Total LBW		White non-		Black non-		Hispanic		Asian		Other <sup>4</sup>		Unknown <sup>5</sup>
	Infants n	% <sup>3</sup>	Hispanic n	% <sup>3</sup>	Hispanic n	% <sup>3</sup>	Hispanic n	% <sup>3</sup>	n	% <sup>3</sup>	n	% <sup>3</sup>	n
<b>State Total<sup>2</sup></b>	6,060	7.5	3,951	6.8	747	12.6	792	8.3	424	8.0	137	8.7	9
<b>&lt;18</b>	184	11.7	56	9.4	41	17.9	67	11.0	13	16.3	7	12.5	0
<b>18-19</b>	303	9.6	121	7.7	49	12.2	103	10.8	17	13.5	12	12.6	1
<b>20-24</b>	889	7.5	434	6.6	160	12.3	203	6.9	58	9.1	34	8.6	0
<b>25-29</b>	1,262	6.8	752	5.9	179	12.1	193	8.0	103	6.8	31	7.5	4
<b>30-34</b>	1,845	6.8	1,362	6.3	175	12.1	139	8.2	136	7.0	33	9.0	0
<b>35-39</b>	1,243	8.2	969	7.8	108	12.7	69	8.8	79	9.4	16	7.6	2
<b>40+</b>	333	10.2	257	9.7	35	14.3	18	11.2	18	11.0	4	10.5	1

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Low Birthweight (LBW): less than 2,500 grams or 5.5 pounds at birth. 2. State totals include women of unknown age. 3. Percentages are based upon the number of low birthweight infants divided by the total births in each age and race/ethnicity category. 4. Other races include American Indian and others not specified. 5. Race and/or mother's age unknown.

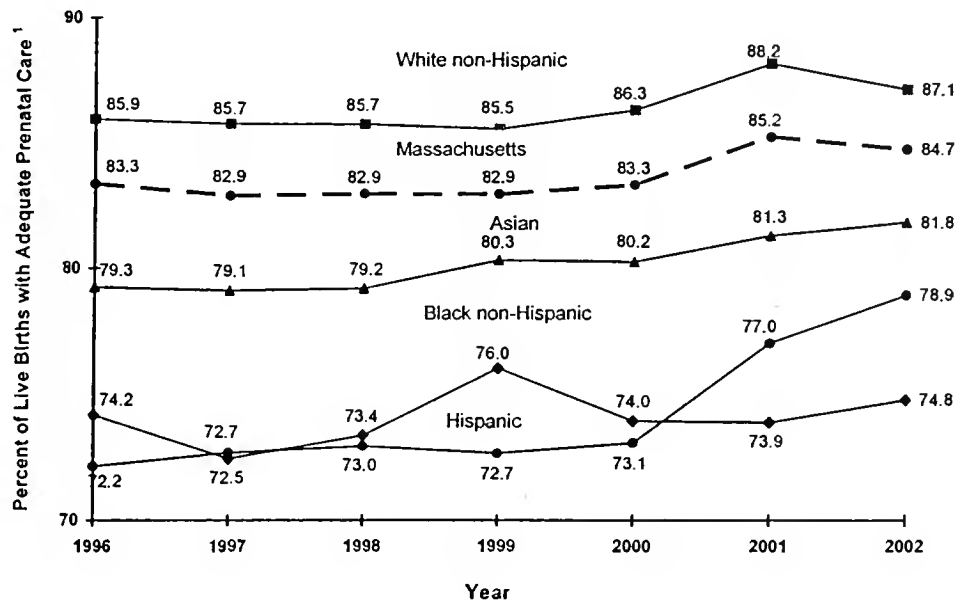
Table B-10. Births by Gestational Age<sup>1</sup>, Race and Hispanic Ethnicity, Massachusetts: 2002

Gestational Age (weeks completed)	Total		White non- Hispanic		Black non- Hispanic		Hispanic		Asian		Other <sup>3</sup>		Unknown	
	n	% <sup>2</sup>	n	% <sup>2</sup>	n	% <sup>2</sup>	n	% <sup>2</sup>	n	% <sup>2</sup>	n	% <sup>2</sup>	n	% <sup>2</sup>
State Total	80,624	100.0	58,136	100.0	5,948	100.0	9,543	100.0	5,300	100.0	1,576	100.0	121	
<20	19	0.0	4	-- <sup>7</sup>	7	0.1	5	0.1	1	-- <sup>7</sup>	2	-- <sup>7</sup>	0	
20-23	163	0.2	89	0.2	42	0.7	20	0.2	11	0.2	1	-- <sup>7</sup>	0	
24-27	330	0.4	186	0.3	53	0.9	62	0.6	23	0.4	6	0.4	0	
28-31	722	0.9	486	0.8	102	1.7	83	0.9	35	0.7	16	1.0	0	
32-35	2,990	3.7	2,116	3.6	286	4.8	361	3.8	159	3.0	64	4.1	4	
36	2,571	3.2	1,806	3.1	241	4.1	310	3.2	175	3.3	36	2.3	3	
37-39 <sup>4</sup>	36,310	45.0	25,908	44.6	2,704	45.5	4,357	45.7	2,600	49.1	705	44.7	36	
40 <sup>4</sup>	26,283	32.6	19,287	33.2	1,747	29.4	3,052	32.0	1,641	31.0	528	33.5	28	
41 <sup>4</sup>	9,820	12.2	7,323	12.6	629	10.6	1,098	11.5	587	11.1	176	11.2	7	
42 <sup>4</sup>	1,048	1.3	702	1.2	107	1.8	151	1.6	55	1.0	33	2.1	0	
43	21	0.0	12	0.0	4	-- <sup>7</sup>	3	-- <sup>7</sup>	2	-- <sup>7</sup>	0	0.0	0	
44+	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	
Unknown <sup>5</sup>	347	0.4	217	0.4	26	0.4	41	0.4	11	0.2	9	0.6	43	
Very early gestation, <28 weeks	512	0.6	279	0.5	102	1.7	87	0.9	35	0.7	9	0.6	0	
Preterm, <37 weeks <sup>6</sup>	6,795	8.5	4,687	8.1	731	12.3	841	8.9	404	7.6	125	8.0	7	

NOTE: Percentages for detailed gestational age category rows ("<20" through "Unknown") are calculated based on all births including those with unknown gestational age. Percentages for "Very early gestation" and "Preterm" rows are calculated based on births with known gestational age only.

1. A clinical estimate of the number of weeks of pregnancy completed; as estimated by the attendant at birth or the postnatal physician. 2. Percentages are based on column total. 3. Other races include American Indian and others not specified. 4. Normal gestational age is defined as 37-42 weeks. 5. Estimate of gestational age not provided. 6. Also known as early gestational age, premature delivery, or preterm delivery. 7. Calculations based on fewer than five events are excluded.

**Figure B-9. Trends in Adequacy of Prenatal Care<sup>1</sup> by Race and Hispanic Ethnicity, Massachusetts: 1996-2002**



PLEASE NOTE THAT VERTICAL SCALE OF GRAPH REPRESENTS A SMALL INTERVAL FOR PURPOSES OF VISUAL REPRESENTATION.

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index.

Table B-11A. Adequacy of Prenatal Care<sup>1</sup> by Selected Characteristics, Massachusetts: 2002

	<u>Adequate Total</u> <sup>2</sup>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		<u>Unknown</u>
	n	%	n	%	n	%	n	%	n	%	n
State Total	67,784	84.7%	31,616	39.5%	36,168	45.2%	5,905	7.4%	6,336	7.9%	599
Age	<b>Maternal Demographics</b>										
<18	1,079	69.6%	562	36.2%	517	33.3%	117	7.5%	355	22.9%	20
18-19	2,260	72.5%	1,092	35.0%	1,168	37.5%	270	8.7%	587	18.8%	27
20-24	9,171	77.9%	4,341	36.9%	4,830	41.0%	1,018	8.6%	1,590	13.5%	101
25-29	15,435	84.1%	7,178	39.1%	8,257	45.0%	1,446	7.9%	1,462	8.0%	141
30-34	23,644	87.6%	10,611	39.3%	13,033	48.3%	1,950	7.2%	1,405	5.2%	164
35-39	13,356	89.0%	6,377	42.5%	6,979	46.5%	915	6.1%	736	4.9%	114
40+	2,839	87.9%	1,455	45.1%	1,384	42.9%	189	5.9%	201	6.2%	31
Educational Attainment											
< than High School	5,603	71.8%	2,862	36.7%	2,741	35.1%	710	9.1%	1,487	19.1%	87
High School	16,193	80.6%	8,051	40.1%	8,142	40.5%	1,629	8.1%	2,271	11.3%	158
Some college	15,513	85.6%	7,450	41.1%	8,063	44.5%	1,358	7.5%	1,256	6.9%	114
College	18,988	89.2%	8,426	39.6%	10,562	49.6%	1,430	6.7%	872	4.1%	121
More than college	11,387	90.5%	4,775	37.9%	6,612	52.5%	773	6.1%	428	3.4%	62
Race/Hispanic Ethnicity											
Hispanic	7,491	79.0%	3,757	39.6%	3,734	39.4%	708	7.5%	1,284	13.5%	60
White non-Hispanic	50,347	87.1%	23,226	40.2%	27,121	46.9%	4,208	7.3%	3,234	5.6%	347
Black non-Hispanic	4,370	74.8%	2,098	35.9%	2,272	38.9%	456	7.8%	1,013	17.3%	109
Asian	4,328	81.9%	1,977	37.4%	2,351	44.5%	388	7.3%	566	10.7%	18
Other	1,191	76.3%	529	33.9%	662	42.4%	138	8.8%	231	14.8%	16
Birthplace											
U.S. States/D.C.	51,063	86.3%	23,657	40.0%	27,406	46.3%	4,370	7.4%	3,760	6.4%	432
Puerto Rico/U.S. Terr.	1,627	78.9%	821	39.8%	806	39.1%	175	8.5%	261	12.7%	18
Non-U.S.-Born	15,024	80.4%	7,103	38.0%	7,921	42.4%	1,353	7.2%	2,310	12.4%	138
Parity <sup>3</sup>	<b>Pregnancy-Related Factors</b>										
1	29,443	84.8%	13,544	39.0%	15,899	45.8%	2,508	7.2%	2,761	8.0%	199
2-3	33,927	85.7%	15,862	40.1%	18,065	45.6%	2,914	7.4%	2,739	6.9%	232
4+	4,385	77.0%	2,196	38.6%	2,189	38.4%	478	8.4%	832	14.6%	49
Smoking <sup>4</sup>											
Yes	4,814	75.9%	2,513	39.6%	2,301	36.3%	590	9.3%	936	14.8%	55
No	62,881	85.5%	29,057	39.5%	33,824	46.0%	5,309	7.2%	5,387	7.3%	484
Plurality	<b>Birth Outcomes</b>										
Singleton	64,116	84.2%	28,461	37.4%	35,655	46.8%	5,811	7.6%	6,198	8.1%	548
Multiple birth	3,668	94.1%	3,155	80.9%	513	13.2%	94	2.4%	138	3.5%	51
Birthweight											
<500 g	96	84.2%	92	80.7%	4	3.5%	7	6.1%	11	9.6%	11
500-1,499 g	845	89.3%	761	80.4%	84	8.9%	23	2.4%	78	8.2%	38
1,499-2,499 g	4,246	86.7%	3,384	69.1%	862	17.6%	188	3.8%	461	9.4%	56
2,500-3,999 g	54,956	84.3%	24,572	37.7%	30,384	46.6%	4,957	7.6%	5,246	8.1%	335
4,000+ g	7,626	85.8%	2,795	31.4%	4,831	54.3%	729	8.2%	538	6.0%	50
Gestational Age											
<28 weeks	422	87.4%	388	80.3%	34	7.0%	15	3.1%	46	9.5%	29
<37 weeks	5,889	88.3%	5,057	75.8%	832	12.5%	248	3.7%	535	8.0%	123
37-42 weeks	61,733	84.4%	26,489	36.2%	35,244	48.2%	5,642	7.7%	5,769	7.9%	317

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. See Glossary and Technical Notes in Appendix for definitions of Index and its categories. 2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution.



Table B-11B. Adequacy of Prenatal Care Initiation<sup>1</sup> by Selected Characteristics, Massachusetts: 2002

	<u>Adequate Total</u> <sup>2</sup>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		Unknown
	n	%	n	%	n	%	n	%	n	%	
State Total	74,257	92.8%	33,719	42.1%	40,538	50.7%	3,752	4.7%	2,016	2.5%	599
Age	<u>Maternal Demographics</u>										
<18	1,213	78.2%	459	29.6%	754	48.6%	211	13.6%	127	8.2%	20
18-19	2,564	82.3%	981	31.5%	1,583	50.8%	391	12.5%	162	5.2%	27
20-24	10,297	87.4%	4,352	36.9%	5,945	50.5%	980	8.3%	502	4.3%	101
25-29	17,019	92.8%	7,904	43.1%	9,115	49.7%	864	4.7%	460	2.5%	141
30-34	25,771	95.5%	12,043	44.6%	13,728	50.8%	775	2.9%	453	1.7%	164
35-39	14,348	95.6%	6,523	43.5%	7,825	52.1%	414	2.8%	245	1.6%	114
40+	3,045	94.3%	1,457	45.1%	1,588	49.2%	117	3.6%	67	2.1%	31
Educational Attainment											
< than High School	6,397	82.0%	2,526	32.4%	3,871	49.6%	901	11.6%	502	6.4%	87
High School	18,003	89.6%	7,738	38.5%	10,265	51.1%	1,388	6.9%	702	3.5%	158
Some college	16,993	93.7%	7,590	41.9%	9,403	51.9%	742	4.1%	392	2.2%	114
College	20,541	96.5%	9,407	44.2%	11,134	52.3%	487	2.3%	262	1.2%	121
More than college	12,217	97.1%	6,418	51.0%	5,799	46.1%	223	1.8%	148	1.2%	62
Race/Hispanic Ethnicity											
Hispanic	8,269	87.2%	3,838	40.5%	4,431	46.7%	812	8.6%	402	4.2%	60
White non-Hispanic	54,924	95.0%	25,176	43.6%	29,748	51.5%	1,892	3.3%	973	1.7%	347
Black non-Hispanic	4,907	84.0%	2,214	37.9%	2,693	46.1%	540	9.2%	392	6.7%	109
Asian	4,748	89.9%	1,915	36.3%	2,833	53.6%	374	7.1%	160	3.0%	18
Other	1,345	86.2%	556	35.6%	789	50.6%	129	8.3%	86	5.5%	16
Birthplace											
U.S. States/D.C.	55,825	94.3%	25,595	43.2%	30,230	51.1%	2,264	3.8%	1,104	1.9%	432
Puerto Rico/U.S. Terr.	1,818	88.1%	822	39.8%	996	48.3%	170	8.2%	75	3.6%	18
Non-U.S.-Born	16,536	88.5%	7,260	38.9%	9,276	49.6%	1,316	7.0%	835	4.5%	138
Parity <sup>3</sup>	<u>Pregnancy-Related Factors</u>										
1	32,206	92.8%	14,702	42.4%	17,504	50.4%	1,626	4.7%	880	2.5%	199
2-3	37,100	93.7%	16,930	42.8%	20,170	51.0%	1,610	4.1%	870	2.2%	232
4+	4,917	86.3%	2,067	36.3%	2,850	50.0%	515	9.0%	263	4.6%	49
Smoking <sup>4</sup>											
Yes	5,461	86.1%	2,181	34.4%	3,280	51.7%	546	8.6%	333	5.3%	55
No	68,700	93.4%	31,496	42.8%	37,204	50.6%	3,200	4.3%	1,677	2.3%	484
Plurality	<u>Birth Outcomes</u>										
Singleton	70,490	92.6%	31,838	41.8%	38,652	50.8%	3,642	4.8%	1,993	2.6%	548
Multiple birth	3,767	96.6%	1,881	48.2%	1,886	48.4%	110	2.8%	23	0.6%	51
Birthweight											
<500 g	104	91.2%	52	45.6%	52	45.6%	3	2.6%	7	6.1%	11
500-1,499 g	875	92.5%	499	52.7%	376	39.7%	46	4.9%	25	2.6%	38
1,499-2,499 g	4,462	91.2%	2,089	42.7%	2,373	48.5%	303	6.2%	130	2.7%	56
2,500-3,999 g	60,381	92.7%	27,215	41.8%	33,166	50.9%	3,089	4.7%	1,689	2.6%	335
4,000+ g	8,419	94.7%	3,857	43.4%	4,562	51.3%	310	3.5%	164	1.8%	50
Gestational Age											
<28 weeks	441	91.3%	231	47.8%	210	43.5%	25	5.2%	17	3.5%	29
<37 weeks	6,172	92.5%	3,070	46.0%	3,102	46.5%	333	5.0%	167	2.5%	123
37-42 weeks	67,907	92.8%	30,589	41.8%	37,318	51.0%	3,402	4.7%	1,835	2.5%	317

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Initiation Index, a component index of the APNCU Index. See Section Definitions for an explanation of Index and its categories.

2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution.

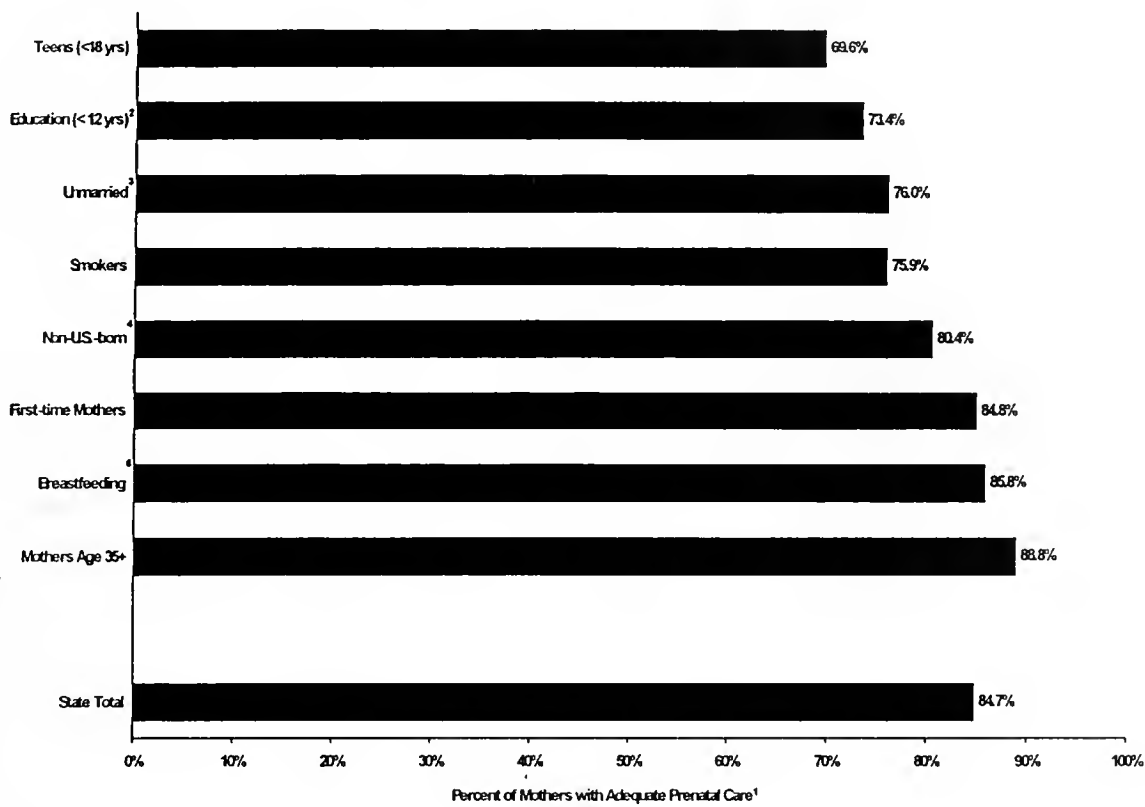
Table B-11C. Adequacy of Prenatal Care Visits<sup>1</sup> by Selected Characteristics, Massachusetts: 2002

	<u>Adequate Total<sup>2</sup></u>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		<u>Unknown</u>
	n	%	n	%	n	%	N	%	n	%	n
State Total	72,675	90.8%	35,373	44.2%	37,302	46.6%	6,453	8.1%	897	1.1%	599
Age	<u>Maternal Demographics</u>										
<18	1,358	87.6%	780	50.3%	578	37.3%	152	9.8%	41	2.6%	20
18-19	2,730	87.6%	1,451	46.6%	1,279	41.0%	324	10.4%	63	2.0%	27
20-24	10,433	88.6%	5,282	44.8%	5,151	43.7%	1,154	9.8%	192	1.6%	101
25-29	16,548	90.2%	8,034	43.8%	8,514	46.4%	1,583	8.6%	212	1.2%	141
30-34	24,681	91.4%	11,421	42.3%	13,260	49.1%	2,077	7.7%	241	0.9%	164
35-39	13,929	92.8%	6,828	45.5%	7,101	47.3%	962	6.4%	116	0.8%	114
40+	2,996	92.8%	1,577	48.8%	1,419	43.9%	201	6.2%	32	1.0%	31
Educational Attainment											
< than High School	6,771	86.8%	3,738	47.9%	3,033	38.9%	862	11.1%	167	2.1%	87
High School	17,945	89.3%	9,377	46.7%	8,568	42.6%	1,829	9.1%	319	1.6%	158
Some college	16,503	91.0%	8,231	45.4%	8,272	45.6%	1,456	8.0%	168	0.9%	114
College	19,637	92.2%	8,940	42.0%	10,697	50.2%	1,493	7.0%	160	0.8%	121
More than college	11,708	93.0%	5,027	39.9%	6,681	53.1%	805	6.4%	75	0.6%	62
Race/Hispanic Ethnicity											
Hispanic	8,552	90.2%	4,569	48.2%	3,983	42.0%	811	8.6%	120	1.3%	60
White non-Hispanic	52,806	91.4%	25,151	43.5%	27,655	47.9%	4,463	7.7%	520	0.9%	347
Black non-Hispanic	5,113	87.6%	2,653	45.4%	2,460	42.1%	569	9.7%	157	2.7%	109
Asian	4,775	90.4%	2,312	43.8%	2,463	46.6%	444	8.4%	63	1.2%	18
Other	1,367	87.6%	657	42.1%	710	45.5%	159	10.2%	34	2.2%	16
Birthplace											
U.S. States/D.C.	53,899	91.1%	25,855	43.7%	28,044	47.4%	4,698	7.9%	596	1.0%	432
Puerto Rico/U.S. Terr.	1,829	88.7%	968	46.9%	861	41.7%	202	9.8%	32	1.6%	18
Non-U.S.-Born	16,873	90.3%	8,512	45.6%	8,361	44.7%	1,546	8.3%	268	1.4%	138
Parity <sup>3</sup>	<u>Pregnancy-Related Factors</u>										
1	31,624	91.1%	15,245	43.9%	16,379	47.2%	2,713	7.8%	375	1.1%	199
2-3	36,005	91.0%	17,437	44.1%	18,568	46.9%	3,171	8.0%	404	1.0%	232
4+	5,015	88.1%	2,677	47.0%	2,338	41.1%	564	9.9%	116	2.0%	49
Smoking <sup>4</sup>											
Yes	5,521	87.1%	3,042	48.0%	2,479	39.1%	680	10.7%	139	2.2%	55
No	67,058	91.1%	32,280	43.9%	34,778	47.3%	5,765	7.8%	754	1.0%	484
Plurality	<u>Birth Outcomes</u>										
Singleton	68,887	90.5%	32,102	42.2%	36,785	48.3%	6,354	8.3%	884	1.2%	548
Multiple birth	3,788	97.1%	3,271	83.9%	517	13.3%	99	2.5%	13	0.3%	51
Birthweight											
<500 g	99	86.8%	95	83.3%	4	3.5%	7	6.1%	8	7.0%	11
500-1,499 g	893	94.4%	803	84.9%	90	9.5%	25	2.6%	28	3.0%	38
1,499-2,499 g	4,601	94.0%	3,681	75.2%	920	18.8%	222	4.5%	72	1.5%	56
2,500-3,999 g	59,039	90.6%	27,676	42.5%	31,363	48.1%	5,412	8.3%	708	1.1%	335
4,000+ g	8,027	90.3%	3,105	34.9%	4,922	55.3%	786	8.8%	80	0.9%	50
Gestational Age											
<28 weeks	447	92.5%	410	84.9%	37	7.7%	15	3.1%	21	4.3%	29
<37 weeks	6,285	94.2%	5,402	81.0%	883	13.2%	277	4.2%	110	1.6%	123
37-42 weeks	66,210	90.5%	29,890	40.9%	36,320	49.7%	6,158	8.4%	776	1.1%	317

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Received Services (Visits) Index, a component index of the APNCU Index. See Section Definitions for an explanation of Index and its categories. 2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution.

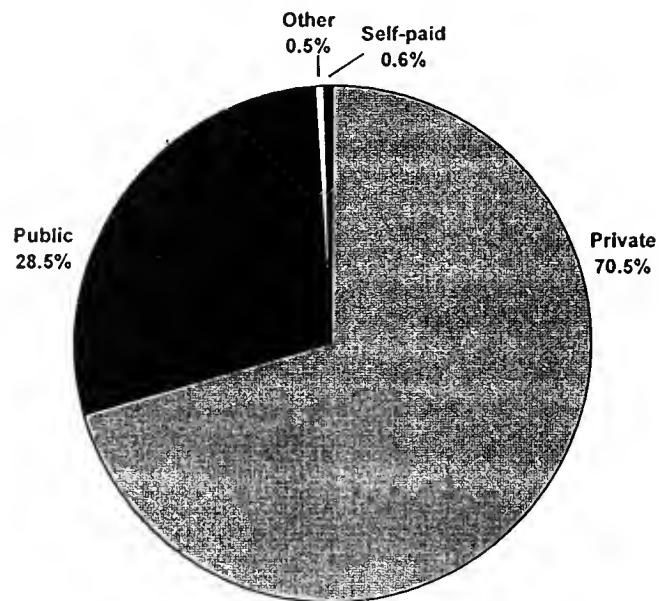
Figure B-10. Adequacy of Prenatal Care<sup>1</sup> for Selected Population Characteristics, Massachusetts 2002



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. 2. Women 20 years of age and older. 3. Marital status at time of birth.  
 4. Non-U.S.-born includes women born outside of the 50 U.S. states, District of Columbia, and U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam). 5. Mother was or was intending to breastfeed at the time the birth certificate was completed.

**Figure B-11. Distribution of Prenatal Care Payment Source<sup>1</sup>,  
Massachusetts: 2002**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated

1. Private: Commercial indemnity plan, commercial managed care (HMO, PPO, IPP, IPA, and other), or other private insurance. Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care. Other: Worker's Compensation and other sources.

**Table B-12. Birth Characteristics by Source of Prenatal Care Payment, Race, and Hispanic Ethnicity, Massachusetts: 2002**

Race, Ethnicity, and Payment Source	Births <sup>1</sup>		Teen Births				Birthweight			
			<18 Years		<20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>	
	n	%	n	%	n	%	n	%	n	%
<b>STATE TOTAL<sup>4</sup></b>	<b>80,624</b>	<b>100.0</b>	<b>1,571</b>	<b>1.9</b>	<b>4,715</b>	<b>5.8</b>	<b>1,109</b>	<b>1.4</b>	<b>6,060</b>	<b>7.5</b>
Public	22,494	28.5	1,170	5.2	3,563	15.8	325	1.4	1,941	8.6
Medicaid <sup>5</sup>	18,562	23.5	1,026	5.5	3,087	16.6	279	1.5	1,640	8.8
Other Public <sup>6</sup>	3,932	5.0	144	3.7	476	12.1	46	1.2	301	7.7
Private <sup>7</sup>	55,678	70.5	346	0.6	974	1.7	692	1.2	3,827	6.9
<b>White non-Hispanic</b>	<b>58,136</b>	<b>100.0</b>	<b>598</b>	<b>1.0</b>	<b>2,167</b>	<b>3.7</b>	<b>666</b>	<b>1.1</b>	<b>3,952</b>	<b>6.8</b>
Public	10,268	18.1	376	3.7	1,465	14.3	105	1.0	772	7.5
Medicaid <sup>5</sup>	8,778	15.5	342	3.9	1,316	15.0	95	1.1	680	7.7
Other Public <sup>6</sup>	1,490	2.6	34	2.3	149	10.0	10	0.7	92	6.2
Private <sup>7</sup>	45,982	80.9	199	0.4	617	1.3	507	1.1	2,973	6.5
<b>Black non-Hispanic</b>	<b>5,948</b>	<b>100.0</b>	<b>229</b>	<b>3.9</b>	<b>630</b>	<b>10.6</b>	<b>182</b>	<b>3.1</b>	<b>747</b>	<b>12.6</b>
Public	3,460	59.2	165	4.8	481	13.9	82	2.4	429	12.4
Medicaid <sup>5</sup>	2,858	48.9	149	5.2	421	14.7	70	2.4	356	12.5
Other Public <sup>6</sup>	602	10.3	16	2.7	60	10.0	12	2.0	73	12.1
Private <sup>7</sup>	2,333	39.9	53	2.3	118	5.1	78	3.3	281	12.0
<b>Hispanic</b>	<b>9,543</b>	<b>100.0</b>	<b>607</b>	<b>6.4</b>	<b>1,557</b>	<b>16.3</b>	<b>162</b>	<b>1.7</b>	<b>792</b>	<b>8.3</b>
Public	6,524	68.7	521	8.0	1,335	20.5	102	1.6	531	8.1
Medicaid <sup>5</sup>	4,996	52.6	433	8.7	1,087	21.8	80	1.6	416	8.3
Other Public <sup>6</sup>	1,528	16.1	88	5.8	248	16.2	22	1.4	115	7.5
Private <sup>7</sup>	2,814	29.6	72	2.6	181	6.4	47	1.7	233	8.3
<b>Asian</b>	<b>5,300</b>	<b>100.0</b>	<b>80</b>	<b>1.5</b>	<b>206</b>	<b>3.9</b>	<b>76</b>	<b>1.4</b>	<b>424</b>	<b>8.0</b>
Public	1,370	26.0	65	4.7	162	11.8	22	1.6	128	9.3
Medicaid <sup>5</sup>	1,192	22.6	62	5.2	155	13.0	21	1.8	116	9.7
Other Public <sup>6</sup>	178	3.4	3	-- <sup>8</sup>	7	3.9	1	-- <sup>8</sup>	12	6.7
Private <sup>7</sup>	3,850	73.1	13	0.3	37	1.0	53	1.4	288	7.5
<b>Other<sup>9</sup></b>	<b>1,576</b>	<b>100.0</b>	<b>56</b>	<b>3.6</b>	<b>151</b>	<b>9.6</b>	<b>22</b>	<b>1.4</b>	<b>137</b>	<b>8.7</b>
Public	863	56.0	43	5.0	120	13.9	14	1.6	80	9.3
Medicaid <sup>5</sup>	730	47.3	40	5.5	108	14.8	13	1.8	71	9.7
Other Public <sup>6</sup>	133	8.6	3	-- <sup>8</sup>	12	9.0	1	-- <sup>8</sup>	9	6.8
Private <sup>7</sup>	652	42.3	9	1.4	21	3.2	7	1.1	49	7.5

**Table B-12 (continued). Birth Characteristics by Source of Prenatal Care Payment, Race, and Hispanic Ethnicity, Massachusetts: 2002**

Race, Ethnicity, and Payment Source	Prenatal Care							
	Adequate <sup>10</sup>		Began 1st Trimester		Caesarean Section		Breastfeeding <sup>11</sup>	
	n	%	n	%	n	%	n	%
<b>STATE TOTAL<sup>4</sup></b>	<b>67,784</b>	<b>84.7</b>	<b>67,457</b>	<b>84.2</b>	<b>22,553</b>	<b>28.1</b>	<b>60,266</b>	<b>76.1</b>
Public	16,711	74.9	15,861	70.9	5,458	24.3	15,135	67.4
Medicaid <sup>5</sup>	14,013	76.1	13,294	71.9	4,456	24.1	12,092	65.2
Other Public <sup>6</sup>	2,698	69.4	2,567	65.7	1,002	25.6	3,043	77.7
Private <sup>7</sup>	49,414	89.0	49,912	89.9	16,484	29.7	44,325	79.7
<b>White non-Hispanic</b>	<b>50,347</b>	<b>87.1</b>	<b>50,763</b>	<b>87.8</b>	<b>16,737</b>	<b>28.9</b>	<b>42,458</b>	<b>74.7</b>
Public	7,903	77.4	7,571	74.0	2,542	24.8	6,040	58.9
Medicaid <sup>5</sup>	6,796	77.8	6,510	74.4	2,117	24.2	4,917	56.1
Other Public <sup>6</sup>	1,107	74.6	1,061	71.4	425	28.6	1,123	75.7
Private <sup>7</sup>	41,042	89.5	41,763	91.0	13,690	29.8	35,913	78.2
<b>Black non-Hispanic</b>	<b>4,370</b>	<b>74.8</b>	<b>4,199</b>	<b>71.4</b>	<b>1,769</b>	<b>29.9</b>	<b>4,540</b>	<b>77.0</b>
Public	2,304	68.1	2,205	64.5	940	27.2	2,503	72.4
Medicaid <sup>5</sup>	1,988	71.0	1,896	67.1	755	26.5	2,065	72.3
Other Public <sup>6</sup>	316	54.2	309	52.4	185	30.8	438	72.9
Private <sup>7</sup>	2,012	86.8	1,939	83.5	794	34.2	1,969	84.5
<b>Hispanic</b>	<b>7,491</b>	<b>79.0</b>	<b>7,155</b>	<b>75.3</b>	<b>2,325</b>	<b>24.5</b>	<b>7,702</b>	<b>81.0</b>
Public	4,925	75.9	4,671	71.9	1,495	23.0	5,083	78.1
Medicaid <sup>5</sup>	3,842	77.3	3,654	73.4	1,178	23.7	3,847	77.1
Other Public <sup>6</sup>	1,083	71.4	1,017	66.7	317	20.8	1,236	81.2
Private <sup>7</sup>	2,447	87.1	2,366	84.1	794	28.2	2,471	87.8
<b>Asian</b>	<b>4,328</b>	<b>81.9</b>	<b>4,138</b>	<b>78.3</b>	<b>1,275</b>	<b>24.1</b>	<b>4,248</b>	<b>80.5</b>
Public	965	70.9	837	61.2	245	17.9	823	60.2
Medicaid <sup>5</sup>	851	71.8	735	61.8	206	17.3	689	57.9
Other Public <sup>6</sup>	114	64.8	102	57.6	39	22.0	134	75.7
Private <sup>7</sup>	3,317	86.3	3,258	84.8	1,014	26.4	3,375	87.7
<b>Other<sup>9</sup></b>	<b>1,191</b>	<b>76.3</b>	<b>1,143</b>	<b>73.0</b>	<b>421</b>	<b>26.8</b>	<b>1,275</b>	<b>81.9</b>
Public	606	70.8	570	66.4	231	26.8	680	78.8
Medicaid <sup>5</sup>	529	72.7	493	67.5	196	26.9	568	77.8
Other Public <sup>6</sup>	77	60.2	77	59.7	35	26.5	112	84.2
Private <sup>7</sup>	555	85.5	542	83.5	176	27.0	563	86.5

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the "Births" category, percentages are based on race/ethnicity totals (group column). For all other categories, percentages are based on Birth totals (row total) excluding unknowns for each characteristic. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low Birthweight: less than 2,500 grams or 5.5 pounds. 4. Total births does not equal Public + Private. Other categories of prenatal care payment are also included in Total: Workers' Compensation, self-paid, and other. 5. Medicaid/MassHealth. 6. Other Public: Commonwealth, Healthy Start, Medicare, other government programs, and free care. 7. Private: commercial indemnity plans or commercial managed care org. (HMO, PPO, IPP, or IPA). 8. Calculations based on fewer than five events are excluded. 9. Other: Mothers who designated their race as American Indian or Other. 10. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. 11. Mother was intending to breastfeed at the time the birth certificate was completed.

**Table B-13. Birth Characteristics by Licensed Maternity Facility<sup>1</sup>, Massachusetts: 2002**

Facility	Location	Occurrence Births <sup>2</sup> (n)	Low Birthweight <sup>3</sup> (%)	Public Payment for Delivery <sup>4</sup> (%)	Adequate Prenatal Care <sup>5</sup> (%)
STATE TOTAL <sup>6</sup>		81,699	7.5	27.8	84.7
Anna Jaques Hospital	Newburyport	935	4.1	18.4	91.5
Baystate Medical Center	Springfield	4,380	12.7	40.4	80.7
Berkshire Medical Center	Pittsfield	774	5.9	38.4	54.1
Beth Israel Deaconess Medical Center	Boston	4,947	11.5	16.6	93.3
Beverly Hospital	Beverly	2,323	5.5	28.1	93.7
Boston Medical Center	Boston	2,006	10.9	87.8	52.3
Brigham And Women's Hospital	Boston	9,859	10.9	19.3	95.3
Brockton Hospital	Brockton	1,135	7.4	57.7	79.3
Cambridge Birth Center	Cambridge	89	-- <sup>7</sup>	33.7	77.5
Cambridge Hospital	Cambridge	923	3.0	61.3	72.9
Cape Cod Hospital	Barnstable	1,019	4.1	39.6	89.9
Caritas Good Samaritan Medical Center	Brockton	1,083	6.6	41.4	70.0
Caritas Norwood Hospital	Norwood	641	3.7	15.2	93.3
Charlton Memorial Hospital	Fall River	1,651	7.1	45.2	87.9
Cooley Dickinson Hospital	Northampton	872	2.9	24.9	92.0
Emerson Hospital	Concord	1,295	3.6	3.9	80.2
Fairview Hospital	Great Barrington	163	-- <sup>7</sup>	42.9	81.0
Falmouth Hospital	Falmouth	635	4.4	30.9	85.2
Franklin Medical Center	Greenfield	451	4.7	41.6	84.3
Harrington Memorial Hospital	Southbridge	481	3.2	41.7	86.6
Heywood Memorial Hospital	Gardner	583	2.6	37.0	75.8
Holy Family Hospital And Medical Center	Methuen	1,458	4.7	19.9	86.7
Holyoke Hospital	Holyoke	559	4.3	64.9	80.0
Jordan Hospital	Plymouth	765	5.5	20.4	71.5
Lawrence General Hospital	Lawrence	1,581	6.3	55.4	90.9
Leominster Hospital	Leominster	1,271	3.1	40.7	85.7
Lowell General Hospital	Lowell	2,083	5.9	36.7	66.2
Martha's Vineyard Hospital	Oak Bluffs	154	-- <sup>7</sup>	33.8	83.0

**Table B-13 (continued). Births Characteristics by Licensed Maternity Facility<sup>1</sup>, Massachusetts: 2002**

Facility	Location	Occurrence Births <sup>2</sup>	(n)	Low Birthweight <sup>3</sup> (%)	Public Payment for Delivery <sup>4</sup> (%)	Adequate Prenatal Care <sup>5</sup> (%)
Mary Lane Hospital	Ware	164		— <sup>7</sup>	45.7	75.6
Massachusetts General Hospital	Boston	3,406		8.3	26.2	86.9
Melrose-Wakefield Hospital	Melrose	1,793		4.4	16.4	88.2
Mercy Medical Center	Springfield	1,310		4.2	56.5	80.5
Metrowest Medical Center-Framingham Union Campus	Framingham	2,263		5.9	20.8	93.5
Milford-Whitinsville Regional Hospital	Milford	980		3.2	18.7	90.7
Morton Hospital	Taunton	626		3.2	37.4	79.5
Mount Auburn Hospital	Cambridge	1,699		2.8	14.2	92.5
Nantucket Cottage Hospital	Nantucket	85		— <sup>7</sup>	43.5	76.5
New England Medical Center Hospital	Boston	1,575		25.8	32.4	89.7
Newton Wellesley Hospital	Newton	3,211		4.9	1.9	83.1
North Adams Regional Hospital	North Adams	276		4.3	48.0	85.5
North Shore Birth Center	Beverly	87		— <sup>7</sup>	13.8	83.9
North Shore Medical Center - Salem Hospital	Salem	1,735		6.1	33.7	74.7
Saint Vincent Hospital	Worcester	1,743		4.5	16.2	91.6
Saints Memorial Medical Ctr.	Lowell	704		4.0	35.5	82.3
South Shore Hospital	Weymouth	4,073		4.5	10.0	92.8
St. Elizabeth's Medical Center	Boston	1,510		13.4	17.2	88.3
St. Luke's Hospital	New Bedford	1,509		5.9	52.2	80.4
Sturdy Memorial Hospital	Attleboro	1,128		3.8	18.1	70.7
The Birthplace At Wellesley	Wellesley	94		— <sup>7</sup>	0.0	89.4
Tobey Hospital	Wareham	502		3.2	28.7	45.9
UMass Memorial Medical Center - West Campus	Worcester	4,383		10.5	29.1	73.8
Winchester Hospital	Winchester	2,427		5.1	5.3	86.9
All Other Hospitals		12		— <sup>7</sup>	12.5	55.6
Home Births, Enroute, Other		288		9.2	24.9	60.0

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Hale Hospital closed to births on July 1, 2001. Name change: Mercy Hospital changed its name to Mercy Medical Center on January 16, 2001. 1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for an explanation of occurrence births. 3. Less than 2,500 grams (5.5 lbs.). 4. Public payment for delivery includes Medicaid/Masshealth, Commonwealth, Medicare, Healthy Start, other government programs, and free care. 5. Based on the APNCU Index. 6. The percentages provided in this row are based on occurrence births and may differ from data presented elsewhere in this book which are based on resident births. 7. Calculations based on values of 1-4 for medical characteristics of facilities with less than 200 births are suppressed based Guidelines for Release of Births Data, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health.



**Table B-13A. Caesarean Section Deliveries and Vaginal Births after Cesarean Section (VBACs) by Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 2002**

Facility	Occurrence Births <sup>2</sup>	Total C-Sections		Primary C-Section <sup>2</sup>		Repeat C-Section <sup>2</sup>		VBACs <sup>2</sup>	
		n	% <sup>3,4</sup>	n	% <sup>3,5</sup>	n	% <sup>3,6</sup>	n	% <sup>7</sup>
<b>STATE TOTAL</b>	<b>81,699</b>	<b>22,947</b>	<b>28.2</b>	<b>14,732</b>	<b>20.5</b>	<b>8,215</b>	<b>85.3</b>	<b>1,419</b>	<b>14.7</b>
Anna Jaques Hospital	935	225	24.1	138	16.7	87	79.1	23	20.9
Baystate Medical Center	4,380	1,181	27.6	777	20.7	404	75.8	129	24.2
Berkshire Medical Center	774	138	17.8	91	12.8	47	73.4	17	26.6
Beth Israel Deaconess Medical Center	4,947	1,690	34.2	1,127	26.4	563	84.0	107	16.0
Beverly Hospital	2,323	606	26.1	377	18.5	229	79.0	61	21.0
Boston Medical Center	2,006	552	27.5	373	20.7	179	88.2	24	11.8
Brigham and Women's Hospital	9,859	2,727	27.8	1,828	21.1	899	77.0	268	23.0
Brockton Hospital	1,135	309	27.2	183	18.5	126	85.1	22	14.9
Cambridge Hospital	923	293	31.7	197	24.2	96	87.3	14	12.7
Cape Cod Hospital	1,019	263	25.8	148	16.9	115	80.4	28	19.6
Caritas Good Samaritan Medical Center	1,083	341	31.5	219	23.2	122	89.1	15	10.9
Caritas Norwood Hospital	641	188	29.3	116	20.7	72	88.9	9	11.1
Charlton Memorial Hospital	1,651	395	23.9	278	18.4	117	81.3	27	18.8
Cooley Dickinson Hospital	872	185	21.2	119	15.3	66	72.5	25	27.5
Emerson Hospital	1,295	415	32.0	256	22.8	159	91.9	14	8.1
Fairview Hospital	163	46	28.2	27	18.8	19	100.0	0	0.0
Falmouth Hospital	635	195	30.7	132	23.6	63	84.0	12	16.0
Franklin Medical Center	451	111	24.6	73	18.2	38	76.0	12	24.0
Harington Memorial Hospital	481	129	27.4	88	20.8	41	85.4	7	14.6
Heywood Hospital	583	122	20.9	81	15.3	41	74.5	14	25.5
Holy Family Hospital and Medical Center	1,458	519	35.6	362	28.2	157	90.2	17	9.8
Holyoke Hospital	559	125	22.4	87	17.0	38	79.2	10	20.8
Jordan Hospital	765	205	26.8	129	19.3	76	79.2	20	20.8
Lawrence General Hospital	1,581	453	28.7	227	17.0	226	92.2	19	7.8
Leominster Hospital	1,271	316	25.4	174	16.0	142	92.2	12	7.8
Lowell General Hospital	2,083	537	25.8	326	17.7	211	87.2	31	12.8
Martha's Vineyard Hospital	154	57	37.0	35	26.5	22	100.0	0	0.0
Mary Lane Hospital	164	47	28.7	24	17.6	23	82.1	5	17.9

**Table B-13A (continued). Caesarean Section Deliveries and Vaginal Births After Cesarean Section (VBACs) by Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 2001**

Facility	Occurrence Births <sup>2</sup>	Total C-Sections		Primary C-Section <sup>2</sup>		Repeat C-Section <sup>2</sup>		VBACs <sup>2</sup>	
		n	% <sup>3,4</sup>	n	% <sup>3,5</sup>	n	% <sup>3,6</sup>	n	% <sup>7</sup>
Massachusetts General Hospital	3,406	956	28.1	658	21.2	298	100.0	0	0.0
Melrose-Wakefield Hospital	1,793	584	32.6	344	22.5	240	91.6	22	8.4 <sup>8</sup>
Mercy Medical Center	1,310	262	20.0	170	14.2	92	83.6	18	16.4 <sup>8</sup>
Metrowest Medical Center-Framingham Union Campus	2,263	729	32.2	455	22.9	274	99.6	1	-- <sup>9</sup>
Milford-Whitinsville Regional Hospital	980	292	29.8	208	23.6	84	86.6	13	13.4 <sup>8</sup>
Morton Hospital	626	180	28.9	110	20.4	70	84.3	13	15.7 <sup>8</sup>
Mount Auburn Hospital	1,699	441	26.0	293	19.4	148	80.0	37	20.0 <sup>8</sup>
Nantucket Cottage Hospital	85	17	20.0	10	13.0 <sup>8</sup>	7	87.5 <sup>8</sup>	1	-- <sup>9</sup>
New England Medical Center Hospital	1,575	514	32.6	370	26.2	144	88.3	19	11.7 <sup>8</sup>
Newton Wellesley Hospital	3,211	1,061	33.1	653	23.5	408	93.6	28	6.4 <sup>8</sup>
North Adams Regional Hospital	276	67	24.3	36	14.8 <sup>8</sup>	31	93.9 <sup>8</sup>	2	-- <sup>9</sup>
North Shore Medical Center - Salem Hospital	1,735	488	28.1	302	19.8	186	87.3	27	12.7 <sup>8</sup>
Saint Vincent Hospital	1,743	415	24.1	281	18.3	134	71.3	54	28.7
Saints Memorial Medical Ctr.	704	210	29.8	129	20.8	81	96.4	3	-- <sup>9</sup>
South Shore Hospital	4,073	1,185	29.1	699	20.0	486	85.3	84	14.7
St. Elizabeth's Medical Center	1,510	534	35.4	348	26.8	186	88.2	25	11.8 <sup>8</sup>
St. Luke's Hospital	1,509	357	23.8	199	15.3	158	81.9	35	18.1 <sup>8</sup>
Sturdy Memorial Hospital	1,128	325	28.8	187	19.1	138	93.2	10	6.8 <sup>8</sup>
Tobey Hospital	502	104	20.8	54	12.3	50	80.6	12	19.4 <sup>8</sup>
UMass Memorial Medical Center-West Campus	4,383	1,156	26.4	808	20.3	348	86.8	53	13.2
Winchester Hospital	2,427	696	28.7	423	19.8	273	97.5	7	2.5 <sup>8</sup>

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Hale Hospital closed to births on July 1, 2001. Name change: Mercy Hospital changed its name to Mercy Medical Center on January 16, 2001.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for explanation of occurrence births, primary and repeat Cesarean sections, and VBACs. The percentages provided in this table are based on occurrence births, and may differ from data, which are based on resident births, presented elsewhere in this book. 3. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 4. Percentage of total Cesarean sections= (total Cesarean births/all births) x 100. 5. Percentage primary Cesarean sections=(primary Cesarean sections/all births-repeat Cesarean sections-VBACs) x 100. 6. Percentage repeat Cesarean sections= (repeat Cesarean sections/(repeat Cesarean sections + VBACs)) x 100. 7. Percentage VBACs= (VBAC deliveries/(repeat Cesarean sections + VBAC)) x 100. 8. This percentage is based on less than 40 total births and should be interpreted with caution. 9. Calculations based on fewer than five events are excluded.

**Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 2002**

<b>Community</b>	<b>Occurrence Births<sup>2</sup></b>	<b>Resident Births<sup>3</sup></b>	<b>Low Birthweight<sup>4</sup></b>	<b>Teen Births (15-19 years)</b>	<b>Infant Deaths<sup>5</sup></b>	<b>Neonatal Deaths<sup>6</sup></b>
<b>STATE TOTAL</b>	<b>81,699</b>	<b>80,624</b>	<b>6,060</b>	<b>4,642</b>	<b>397</b>	<b>299</b>
Abington	0	177	7	7	0	0
Acton	1	244	13	3	0	0
Acushnet	0	98	14	5	1	0
Adams	0	86	-- <sup>1</sup>	10	0	0
Agawam	0	238	20	9	0	0
Alford	0	3	0	0	1	1
Amesbury	0	239	23	6	1	1
Amherst	5	192	7	10	2	0
Andover	1	349	12	2	0	0
Aquinnah (Gay Head)	0	3	0	0	0	0
Arlington	1	545	32	5	1	1
Ashburnham	0	61	8	0	0	0
Ashby	0	24	0	0	0	0
Ashfield	0	11	0	0	0	0
Ashland	1	288	18	8	0	0
Athol	0	118	5	15	0	0
Attleboro	1,131	641	46	32	1	1
Auburn	0	154	8	4	1	1
Avon	0	42	8	2	1	1
Ayer	0	105	-- <sup>1</sup>	5	0	0
Barnstable	1,023	442	34	35	3	1
Barre	0	66	-- <sup>1</sup>	7	0	0
Becket	0	22	-- <sup>1</sup>	2	1	1
Bedford	0	148	14	0	1	1
Belchertown	2	178	11	0	0	0
Bellingham	2	255	16	8	1	1
Belmont	0	270	12	1	1	0
Berkley	0	88	5	3	1	1
Berlin	0	28	-- <sup>1</sup>	0	1	1
Bernardston	0	22	0	0	0	0
Beverly	2,412	451	21	14	0	0
Billerica	3	553	34	14	1	0
Blackstone	0	124	11	8	0	0
Blandford	0	11	0	1	0	0
Bolton	0	72	-- <sup>1</sup>	0	0	0
Boston	23,337	8,011	761	664	56	41
Bourne	1	252	15	17	0	0
Boxborough	0	59	-- <sup>1</sup>	2	0	0
Boxford	0	87	5	0	0	0
Boylston	1	55	5	0	0	0
Braintree	2	437	39	11	2	2

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>
Brewster	0	63	-- <sup>1</sup>	1	0	0
Bridgewater	1	266	18	4	1	1
Brimfield	0	34	-- <sup>1</sup>	4	1	1
Brockton	2,221	1537	149	163	9	9
Brookfield	0	33	-- <sup>1</sup>	0	0	0
Brookline	3	649	60	5	5	5
Buckland	1	9	0	0	0	0
Burlington	2	328	18	3	1	0
Cambridge	2,718	1,071	75	24	7	5
Canton	0	282	14	2	5	5
Carlisle	0	49	5	0	0	0
Carver	0	143	17	6	0	0
Charlemont	1	12	0	1	0	0
Charlton	0	153	6	3	0	0
Chatham	0	35	-- <sup>1</sup>	2	0	0
Chelmsford	3	413	33	10	1	1
Chelsea	1	617	33	90	2	0
Cheshire	0	22	-- <sup>1</sup>	2	0	0
Chester	1	14	-- <sup>1</sup>	2	0	0
Chesterfield	1	14	0	0	0	0
Chicopee	0	639	55	60	3	3
Chilmark	0	7	0	1	0	0
Clarksburg	1	14	0	2	0	0
Clinton	4	181	12	6	0	0
Cohasset	0	88	-- <sup>1</sup>	1	0	0
Colrain	0	15	-- <sup>1</sup>	1	0	0
Concord	1,298	149	9	0	0	0
Conway	1	15	-- <sup>1</sup>	0	0	0
Cummington	0	9	0	0	0	0
Dalton	0	41	0	6	0	0
Danvers	0	233	22	4	0	0
Dartmouth	0	265	13	8	1	1
Dedham	1	309	21	7	1	1
Deerfield	0	48	-- <sup>1</sup>	1	0	0
Dennis	1	136	13	7	1	1
Dighton	1	61	-- <sup>1</sup>	4	0	0
Douglas	0	128	11	7	3	2
Dover	1	67	-- <sup>1</sup>	0	0	0
Dracut	2	369	22	9	1	1
Dudley	0	126	15	5	0	0
Dunstable	0	19	0	0	0	0
Duxbury	0	174	13	1	0	0
East Bridgewater	0	168	17	5	0	0
East Brookfield	0	16	0	0	0	0
East Longmeadow	0	134	9	3	0	0

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

<b>Community</b>	<b>Occurrence Births<sup>2</sup></b>	<b>Resident Births<sup>3</sup></b>	<b>Low Birthweight<sup>4</sup></b>	<b>Teen Births (15-19 years)</b>	<b>Infant Deaths<sup>5</sup></b>	<b>Neonatal Deaths<sup>6</sup></b>
Eastham	0	32	0	0	0	0
Easthampton	0	170	16	8	1	1
Easton	0	250	21	3	1	0
Edgartown	0	48	-- <sup>1</sup>	2	0	0
Egremont	0	5	0	0	0	0
Erving	0	11	-- <sup>1</sup>	0	0	0
Essex	0	40	-- <sup>1</sup>	1	0	0
Everett	0	507	42	30	0	0
Fairhaven	0	137	7	10	0	0
Fall River	1,653	1,190	108	158	8	8
Falmouth	637	289	19	24	3	2
Fitchburg	1	556	46	67	6	4
Florida	0	1	0	0	0	0
Foxborough	0	216	6	4	0	0
Framingham	2,265	939	92	41	5	3
Franklin	1	482	38	4	4	3
Freetown	1	102	12	3	0	0
Gardner	583	226	17	23	0	0
Georgetown	0	110	-- <sup>1</sup>	0	0	0
Gill	0	13	-- <sup>1</sup>	1	0	0
Gloucester	0	303	24	18	2	1
Goshen	0	12	0	0	0	0
Gosnold	0	0	0	0	0	0
Grafton	0	220	9	6	0	0
Granby	0	51	-- <sup>1</sup>	3	0	0
Granville	0	13	0	0	0	0
Great Barrington	164	64	-- <sup>1</sup>	3	1	1
Greenfield	452	165	10	19	0	0
Groton	1	116	11	1	1	0
Groveland	0	79	6	2	0	0
Hadley	1	30	-- <sup>1</sup>	1	1	1
Halifax	0	84	-- <sup>1</sup>	3	0	0
Hamilton	1	118	5	0	0	0
Hampden	0	46	-- <sup>1</sup>	1	0	0
Hancock	0	9	0	0	0	0
Hanover	0	160	9	2	0	0
Hanson	0	122	7	2	0	0
Hardwick	0	25	-- <sup>1</sup>	3	1	1
Harvard	0	46	-- <sup>1</sup>	0	1	1
Harwich	1	99	-- <sup>1</sup>	5	1	1
Hatfield	0	25	-- <sup>1</sup>	0	0	0
Haverhill	1	848	71	67	9	8
Hawley	0	0	0	0	0	0
Heath	0	11	0	0	0	0
Hingham	0	273	17	2	1	1

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>
Hinsdale	0	20	— <sup>1</sup>	4	0	0
Holbrook	0	117	8	5	0	0
Holden	2	156	— <sup>1</sup>	4	0	0
Holland	0	25	0	2	0	0
Holliston	0	176	12	1	1	1
Holyoke	562	620	64	124	7	7
Hopedale	0	70	— <sup>1</sup>	2	0	0
Hopkinton	1	222	19	4	1	1
Hubbardston	0	55	— <sup>1</sup>	1	1	0
Hudson	1	237	16	7	2	1
Hull	0	129	— <sup>1</sup>	4	0	0
Huntington	1	31	— <sup>1</sup>	3	0	0
Ipswich	0	149	15	2	0	0
Kingston	0	155	6	2	0	0
Lakeville	0	149	8	4	0	0
Lancaster	0	76	— <sup>1</sup>	2	0	0
Lanesborough	0	24	— <sup>1</sup>	2	0	0
Lawrence	1,583	1,440	108	227	8	5
Lee	0	61	6	4	3	2
Leicester	0	101	— <sup>1</sup>	6	0	0
Lenox	0	32	0	0	0	0
Leominster	1,271	546	47	39	1	0
Leverett	1	13	— <sup>1</sup>	1	0	0
Lexington	1	225	17	1	1	1
Leyden	0	2	— <sup>1</sup>	0	0	0
Lincoln	3	100	— <sup>1</sup>	0	0	0
Littleton	0	124	— <sup>1</sup>	1	0	0
Longmeadow	0	188	18	0	2	2
Lowell	2,794	1,790	141	228	18	11
Ludlow	0	172	6	9	0	0
Lunenburg	0	93	5	2	0	0
Lynn	4	1,457	117	162	9	8
Lynnfield	0	113	— <sup>1</sup>	0	0	0
Malden	3	814	58	25	4	4
Manchester-by-the-Sea	0	49	— <sup>1</sup>	0	0	0
Mansfield	0	374	22	6	0	0
Marblehead	0	242	14	1	1	0
Marion	0	46	— <sup>1</sup>	2	0	0
Marlborough	2	566	52	28	4	4
Marshfield	0	358	19	7	0	0
Mashpee	0	145	15	5	1	1
Mattapoisett	0	44	— <sup>1</sup>	0	0	0
Maynard	2	169	12	3	0	0
Medfield	0	136	15	1	0	0
Medford	3	640	47	10	2	2

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

<b>Community</b>	<b>Occurrence Births<sup>2</sup></b>	<b>Resident Births<sup>3</sup></b>	<b>Low Birthweight<sup>4</sup></b>	<b>Teen Births (15-19 years)</b>	<b>Infant Deaths<sup>5</sup></b>	<b>Neonatal Deaths<sup>6</sup></b>
Medway	0	175	11	0	1	1
Melrose	1,793	379	27	1	1	0
Mendon	0	62	-- <sup>1</sup>	0	0	0
Merrimac	0	68	5	0	0	0
Methuen	1,458	584	50	26	2	2
Middleborough	1	274	19	16	2	2
Middlefield	0	6	0	0	0	0
Middleton	0	91	6	0	0	0
Milford	980	423	42	14	3	3
Millbury	1	151	7	6	2	1
Millis	1	111	7	1	0	0
Millville	0	40	-- <sup>1</sup>	1	0	0
Milton	4	318	17	5	0	0
Monroe	0	2	0	0	0	0
Monson	0	98	9	4	1	1
Montague	2	92	7	13	0	0
Monterey	1	6	0	0	0	0
Montgomery	0	8	-- <sup>1</sup>	0	0	0
Mount Washington	0	0	0	0	0	0
Nahant	0	33	6	1	0	0
Nantucket	87	137	12	4	2	1
Natick	4	528	34	1	1	1
Needham	1	343	17	1	0	0
New Ashford	0	5	0	0	0	0
New Bedford	1,514	1,321	102	175	10	4
New Braintree	0	8	0	0	0	0
New Marlborough	0	16	-- <sup>1</sup>	2	0	0
New Salem	0	12	0	0	0	0
Newbury	0	92	12	2	0	0
Newburyport	936	234	15	7	4	3
Newton	3,216	822	56	9	3	3
Norfolk	1	138	10	1	0	0
North Adams	276	144	12	20	1	1
North Andover	0	328	11	3	1	1
North Attleboro	2	358	17	12	1	1
North Brookfield	0	53	-- <sup>1</sup>	1	0	0
North Reading	0	167	16	4	1	0
Northampton	881	203	4	10	0	0
Northborough	1	169	10	2	0	0
Northbridge	0	215	16	12	1	1
Northfield	1	18	0	0	0	0
Norton	0	269	22	8	2	2
Norwell	0	135	7	1	1	1
Norwood	642	387	22	6	0	0
Oak Bluffs	156	64	6	2	0	0

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

<b>Community</b>	<b>Occurrence Births<sup>2</sup></b>	<b>Resident Births<sup>3</sup></b>	<b>Low Birthweight<sup>4</sup></b>	<b>Teen Births (15-19 years)</b>	<b>Infant Deaths<sup>5</sup></b>	<b>Neonatal Deaths<sup>6</sup></b>
Oakham	0	15	0	0	0	0
Orange	0	88	9	12	0	0
Orleans	0	35	0	0	0	0
Otis	0	7	0	0	0	0
Oxford	1	158	9	7	1	1
Palmer	1	123	6	10	2	1
Paxton	0	32	-- <sup>1</sup>	1	0	0
Peabody	2	514	46	10	1	0
Pelham	1	8	0	0	0	0
Pembroke	0	255	16	7	2	1
Pepperell	1	155	12	6	2	2
Peru	0	9	-- <sup>1</sup>	1	0	0
Petersham	1	10	0	1	0	0
Phillipston	0	17	-- <sup>1</sup>	3	0	0
Pittsfield	777	528	51	61	1	0
Plainfield	0	5	-- <sup>1</sup>	1	0	0
Plainville	0	117	-- <sup>1</sup>	4	2	2
Plymouth	771	715	58	22	2	1
Plympton	1	27	0	0	0	0
Princeton	0	31	-- <sup>1</sup>	2	0	0
Provincetown	0	14	-- <sup>1</sup>	2	0	0
Quincy	2	1,154	73	31	6	4
Randolph	0	418	51	16	3	2
Raynham	0	140	14	4	0	0
Reading	2	313	22	1	0	0
Rehoboth	1	104	9	0	1	1
Revere	2	649	50	51	2	2
Richmond	0	8	0	1	0	0
Rochester	0	52	-- <sup>1</sup>	1	0	0
Rockland	0	248	12	6	0	0
Rockport	0	63	-- <sup>1</sup>	2	0	0
Rowe	0	4	-- <sup>1</sup>	0	0	0
Rowley	0	72	8	0	0	0
Royalston	0	6	0	1	0	0
Russell	2	19	0	1	1	0
Rutland	0	101	6	6	0	0
Salem	1,736	540	42	25	3	3
Salisbury	0	100	14	7	0	0
Sandisfield	0	6	0	2	0	0
Sandwich	0	184	5	3	1	1
Saugus	1	253	13	7	0	0
Savoy	0	7	-- <sup>1</sup>	0	0	0
Scituate	1	219	21	0	0	0
Seekonk	0	140	-- <sup>1</sup>	2	1	1
Sharon	0	181	15	1	0	0



**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

<b>Community</b>	<b>Occurrence Births<sup>2</sup></b>	<b>Resident Births<sup>3</sup></b>	<b>Low Birthweight<sup>4</sup></b>	<b>Teen Births (15-19 years)</b>	<b>Infant Deaths<sup>5</sup></b>	<b>Neonatal Deaths<sup>6</sup></b>
Sheffield	1	23	0	2	0	0
Shelburne	0	17	— <sup>1</sup>	1	0	0
Sherborn	0	49	0	0	0	0
Shirley	1	74	5	2	0	0
Shrewsbury	0	485	31	7	2	2
Shutesbury	0	14	0	1	0	0
Somerset	0	126	10	6	1	1
Somerville	2	905	69	50	1	1
South Hadley	0	156	5	5	3	3
Southampton	0	50	7	0	0	0
Southborough	1	133	9	1	0	0
Southbridge	482	231	19	28	4	3
Southwick	0	85	— <sup>1</sup>	3	1	0
Spencer	0	131	10	6	0	0
Springfield	5,700	2,357	255	423	23	16
Sterling	2	84	6	4	0	0
Stockbridge	0	15	0	1	0	0
Stoneham	0	258	26	2	0	0
Stoughton	3	320	20	9	0	0
Stow	0	73	— <sup>1</sup>	0	1	0
Sturbridge	1	98	— <sup>1</sup>	1	1	0
Sudbury	0	223	15	1	1	1
Sunderland	1	32	— <sup>1</sup>	0	0	0
Sutton	1	110	— <sup>1</sup>	3	0	0
Swampscott	0	167	7	2	0	0
Swansea	0	131	16	2	1	1
Taunton	626	752	57	57	6	5
Templeton	2	88	0	9	0	0
Tewksbury	1	373	25	6	0	0
Tisbury	1	48	6	1	0	0
Tolland	0	3	0	0	0	0
Topsfield	0	51	7	0	0	0
Townsend	0	99	— <sup>1</sup>	7	0	0
Truro	1	15	0	1	0	0
Tyngsborough	0	147	9	3	0	0
Tyringham	0	3	0	0	0	0
Upton	0	103	9	1	0	0
Uxbridge	0	179	7	5	0	0
Wakefield	0	348	19	4	1	1
Wales	0	16	0	0	0	0
Walpole	0	293	20	1	0	0
Waltham	4	672	47	24	4	4
Ware	164	129	15	10	2	1
Wareham	503	272	12	33	3	2
Warren	0	70	14	6	1	1

**Table B-14A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2002**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>
Warwick	0	5	0	1	0	0
Washington	0	4	0	1	0	0
Watertown	1	363	29	7	2	1
Wayland	0	143	13	1	0	0
Webster	1	215	24	22	0	0
Wellesley	94	346	22	0	0	0
Wellfleet	0	23	0	2	0	0
Wendell	0	7	— <sup>1</sup>	0	0	0
Wenham	0	38	— <sup>1</sup>	0	0	0
West Boylston	0	53	6	1	3	3
West Bridgewater	0	67	5	1	0	0
West Brookfield	0	40	— <sup>1</sup>	3	0	0
West Newbury	0	49	— <sup>1</sup>	0	0	0
West Springfield	1	339	27	12	3	2
West Stockbridge	0	13	0	0	0	0
West Tisbury	1	17	— <sup>1</sup>	0	0	0
Westborough	0	240	14	5	0	0
Westfield	2	458	33	28	0	0
Westford	2	273	28	3	0	0
Westhampton	0	15	— <sup>1</sup>	0	0	0
Westminster	0	78	6	3	1	1
Weston	0	106	— <sup>1</sup>	0	0	0
Westport	0	128	10	7	0	0
Westwood	0	175	9	1	0	0
Weymouth	4,075	702	55	21	2	2
Whately	0	15	— <sup>1</sup>	1	0	0
Whitman	1	208	20	8	1	1
Wilbraham	0	89	0	0	0	0
Williamsburg	0	20	0	1	0	0
Williamstown	0	35	6	0	0	0
Wilmington	0	302	22	3	1	1
Winchendon	0	138	6	13	0	0
Winchester	2,429	266	17	1	0	0
Windsor	1	7	0	0	0	0
Winthrop	0	179	5	4	0	0
Woburn	2	476	39	8	2	1
Worcester	6,148	2,617	197	226	23	16
Worthington	0	5	0	0	0	0
Wrentham	0	131	8	2	1	1
Yarmouth	0	202	13	11	0	0

1. Values of 1-4 for medical characteristics of communities with less than 200 births are suppressed based on Guidelines for Release of Birth Data, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health. 2. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. See Section Definitions for more details. 3. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). See Section Definitions for more details. 4. Less than 2,500 grams (5.5 lbs.). 5. Death of a child whose age is less than one year. 6. Death of a child whose age is less than 28 days.

**Table B-14B. Birth Characteristics, Occurrence and Resident Births and Infant Deaths by County, Massachusetts: 2002**

County Name	Occurrence Births <sup>1</sup>	Resident Births <sup>2</sup>		Deaths		
	Number	Low Birthweight <sup>3</sup>	Teen Births (15-19 years)	Infant <sup>4</sup>	Neonatal <sup>5</sup>	
STATE TOTAL	81,699	80,624	6,060	4,642	397	299
Barnstable	1,664	1,966	122	115	10	7
Berkshire	1,221	1,240	94	126	8	6
Bristol	4,929	6,675	512	505	36	27
Dukes	158	187	14	6	0	0
Essex	8,135	9,584	701	598	41	32
Franklin	460	653	48	53	0	0
Hampden	6,269	5,729	513	696	44	33
Hampshire	1,056	1,309	77	52	9	6
Middlesex	16,563	18,773	1,355	608	74	53
Nantucket	87	137	12	4	2	1
Norfolk	4,833	8,389	592	150	34	30
Plymouth	3,500	6,457	470	309	22	19
Suffolk	23,340	9,456	849	809	60	43
Worcester	9,484	10,069	701	611	57	42

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. See Section Definitions for more details. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). See Section Definitions for more details. 3. Less than 2,500 grams (5.5 lbs.). 4. Death of a child whose age is less than one year. 5. Death of a child whose age is less than 28 days.

**Table B-14C. Birth Characteristics, Occurrence and Resident Births and Infant Deaths,  
Massachusetts Community Health Network Areas (CHNAs): 2002**

Community Health Network Area	Occurrence Births <sup>1</sup>	Resident Births <sup>2</sup>		Deaths	
		Number	Low Birthweight <sup>3</sup> (15-19 years)	Infant <sup>4</sup>	Neonatal <sup>5</sup>
<b>STATE TOTAL</b>	81,699	80,624	6,060	4,642	397
Community Health Network of Berkshire County					
Upper Valley Health Web (Franklin County)	1,221	1,240	94	126	8
Partnership for Health in Hampshire County (Northampton)	461	804	55	73	0
The Community Health Connection (Springfield)	1,055	1,278	75	49	9
Community Health Network of Southern Worcester County	5,704	3,751	350	467	33
Community Partners for Health (Milford)	485	1,399	106	88	8
Community Health Network of Greater Metro West (Framingham)	984	2,366	170	65	13
Community Wellness Coalition (Worcester)	2,280	5,297	387	117	19
Fitchburg/Gardner Community Health Network	6,152	4,024	271	261	31
Greater Lowell Community Health Network	1,866	3,147	218	208	15
Greater Lawrence Community Health Network	2,805	3,937	292	273	21
Greater Haverhill Community Health Network	3,042	2,792	187	258	11
Community Health Network North (Beverly/Gloucester)	937	1,978	165	91	14
North Shore Community Health Network	2,413	1,262	79	37	2
Greater Woburn/Concord/Littleton Community Health Network	1,743	3,552	270	212	14
North Suburban Health Alliance (Medford/Malden/Melrose)	3,736	2,470	163	22	6
Greater Cambridge/Somerville Community Health Network	1,801	3,426	257	77	9
West Suburban Health Network (Newton/Waltham)	2,722	3,154	217	87	12
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	3,317	2,840	177	42	8
Blue Hills Community Health Alliance (Greater Quincy)	23,343	10,105	909	814	65
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	4,726	4,723	337	101	20
Greater Brockton Community Health Network	566	1,934	162	226	10
South Shore Community Partners in Prevention (Plymouth)	2,226	3,152	273	207	13
Greater Attleboro-Taunton Health & Education Response	772	2,441	161	58	4
Partners for a Healthier Community (Fall River)	1,762	3,350	226	148	15
Greater New Bedford Health & Human Services Coalition	1,653	1,575	144	173	10
Cape and Islands Community Health Network	2,018	2,337	167	237	15
	1,909	2,290	148	125	12

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. See Section Definitions for more details. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, city/town). See Section Definitions for more details. 3. Less than 2,500 grams (5.5 lbs.). 4. Death of a child whose age is less than one year. 5. Death of a child whose age is less than 28 days.

## DEATHS



## SECTION C

### DEATHS

The number of Massachusetts resident deaths increased from 2001 (56,733 deaths) to 2002 (56,881 deaths). However, the 2002 death rate of 884.7 per 100,000 population was slightly lower than the 2001 death rate of 885.5. As with live births, Massachusetts resident deaths include all deaths to Massachusetts residents regardless of the state in which the deaths occurred. Most data presented in this section are resident data. Occurrence data are used only for medical examiner data.

#### DEATHS BY RACE/ETHNICITY

From 2002 to 2001, the number of deaths by race/ethnicity remained relatively constant with White non-Hispanic residents comprising 94.4% of total deaths in Massachusetts. Black non-Hispanic deaths totaled 3.6% of total deaths, Hispanic deaths 1.3%, and Asian deaths 0.5%.

Prior to 1989, only race data was collected on death certificates. A separate item on Hispanic origin was added to the death record beginning January 1, 1989. This item asks whether the decedent was of Hispanic origin. If answered affirmatively, then specific Hispanic origin (e.g., Puerto Rican, Dominican, Cuban, etc.) is requested.

#### DEATHS BY AGE

Persons 75 years of age or older accounted for 63.5% of all resident deaths. The percent of deaths to residents in this age group vary widely by sex and race/ethnicity.

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE NON-HISPANIC	44.39	55.61
	BLACK NON-HISPANIC	71.66	28.34
	HISPANIC	80.67	19.33
	ASIAN	57.89	42.11
	OTHER/UNKNOWN	61.11	38.89
	TOTAL	46.69	53.31
FEMALE	WHITE NON-HISPANIC	25.76	74.24
	BLACK NON-HISPANIC	54.22	45.78
	HISPANIC	65.22	34.78
	ASIAN	55.75	44.25
	OTHER/UNKNOWN	44.00	56.00
	TOTAL	27.67	72.33
TOTAL	WHITE NON-HISPANIC	34.32	65.68
	BLACK NON-HISPANIC	63.12	36.88
	HISPANIC	74.27	25.73
	ASIAN	56.98	43.02
	OTHER/UNKNOWN	51.16	48.84
	TOTAL	36.51	63.49

## DEATHS BY PLACE OF OCCURRENCE

Between 2001 and 2002, there was little variation in the sites where deaths occurred. The data are presented below:

SITE	% OF DEATHS 2002	% OF DEATHS 2001
HOSPITAL	44.7	44.8
NURSING OR REST HOME	30.3	30.4
AT HOME	21.6	21.1
EN ROUTE TO HOSPITAL OR DEAD ON ARRIVAL	1.6	1.6
OTHER AND UNKNOWN <sup>1</sup>	1.8	2.1
TOTAL	100.0	100.0

<sup>1</sup> Other and Unknown includes prison or other institutions and all other places.

## DEATHS BY CAUSE

In 1999, the International Classification of Disease, Tenth Revision (ICD-10) replaced the Ninth revision of this coding system. The World Health Organization developed the International Classification of Disease and the United States adopted it in accordance with an international agreement to promote international comparability in collecting, classifying, and tabulating mortality statistics.

Cause of death statistics in this report are based on the Tenth Revision of the International Classification of Diseases (ICD-10). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME), developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-10 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

The leading causes of death differed markedly by race and ethnicity in 2002, as in previous years. Nine of the ten leading causes of death for White non-Hispanics were chronic conditions (e.g., heart disease, cancer, stroke, respiratory illness, and diabetes) which usually afflict older people. The leading causes of death for Black non-Hispanics included AIDS/HIV-related diseases, signs and symptoms of ill defined conditions, and homicide, which occur more frequently among younger people. For Asian non-Hispanics, perinatal conditions and suicide were among the top ten leading causes of death. For Hispanics, AIDS/HIV-related diseases, perinatal conditions, homicide, injuries of undetermined intent, and signs and symptoms of ill defined conditions were among the leading causes of death in 2002.



# Leading Causes of Death by Race/Ethnicity, 2002

White non-Hispanic			Black non-Hispanic			Asian non-Hispanic			Hispanic			Total		
Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%
Heart disease	13,915	26.3	Cancer	534	23.5	Cancer	161	30.3	Cancer	209	17.9	Heart disease	14,694	26.3
Cancer	12,983	24.6	Heart disease	464	20.4	Heart disease	97	18.3	Heart disease	205	17.6	Cancer	13,899	24.9
Stroke	3,338	6.3	Stroke	126	5.5	Stroke	33	6.2	Unintentional Injuries <sup>1</sup>	70	6	Stroke	3,557	6.4
Chronic Lower Respiratory Disease	2,633	5	Diabetes	96	4.2	Unintentional Injuries <sup>1</sup>	24	4.5	Diabetes	64	5.5	Chronic Lower Respiratory Disease	2,744	4.9
Pneumonia & Influenza	1,959	3.7	Nephritis	78	3.4	Diabetes	18	3.4	Stroke	56	4.8	Pneumonia & Influenza	2,050	3.7
Alzheimer's Disease	1,542	2.9	Homicide	70	3.1	Chronic Lower Respiratory Disease	18	3.4	AIDS/HIV-related diseases	52	4.5	Alzheimer's Disease	1,587	2.8
Unintentional Injuries <sup>1</sup>	1,247	2.4	Unintentional Injuries <sup>1</sup>	69	3	Pneumonia & Influenza	16	3	Injuries of Undetermined intent <sup>2</sup>	46	3.9	Diabetes	1,418	2.5
Diabetes	1,238	2.3	AIDS/HIV-related diseases	68	3	Suicide	15	2.8	Perinatal conditions	42	3.6	Unintentional Injuries <sup>1</sup>	1,411	2.5
Nephritis	1,180	2.2	Signs and Symptoms	65	2.9	Nephritis	14	2.6	Chronic Lower Respiratory Disease	40	3.4	Nephritis	1,292	2.3
Septicemia	938	1.8	Chronic Lower Respiratory Disease	53	2.3	Perinatal conditions	11	2.1	Signs and Symptoms	37	3.1	Septicemia	1,015	1.8
All other causes	11,866	22.5	All other causes	652	28.7	All other causes	124	23.4	All other causes	345	29.6	All other causes	13,214	21.9
Total	52,839	100	Total	2,275	100	Total	531	100	Total	1,166	100	Total	56,881	100

<sup>1</sup> Unintentional Injuries such as vehicular accidents, falls, fires, and drowning that were not intended to occur.

<sup>2</sup> Injuries such as falls, fires, and drownings where there was not enough information to determine intent.

## ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

In 2002, 229 Massachusetts residents died from AIDS and HIV-related illnesses. This represents an 8.0% decrease from 2001 and a 62.4% reduction from the 1996 values. The proportion of HIV/AIDS related deaths for those over 45 years old has increased from 20% to 55% between 1995 and 2002. The marked decline in the number of deaths from AIDS and HIV-related diseases from 1996 to 2002 is due in large part to improved treatment efforts that have resulted in increased longevity.

## DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths certified by medical examiners decreased from 4,062 in 2001 to 3,994 in 2002. Of the deaths certified by medical examiners, 38.7% were reported as a result of natural causes. The percentage of deaths due to natural causes (i.e., non-injury related causes) certified by medical examiners varies somewhat by county, from a high of 85.7% in Nantucket County (this percentage is based on only 7 deaths and should be interpreted with caution) to a low of 31.5% in Worcester County. Dukes County had the greatest percentage of deaths (33.0%) that was referred to medical examiners, while the highest number of such deaths was in Middlesex County with 2,701 deaths.

## DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 2000 US population, the same as used by the National Center for Health Statistics. The result of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

### COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks: a consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. (The city of Boston constitutes its own Community Health Network Area.) It is hoped that the Networks will mobilize around key health issues impacting the community,

promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

### DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

### INTERNATIONAL CLASSIFICATION OF DISEASES, TENTH REVISION

The International Classification of Disease (ICD) classifies cause of death information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Tenth Revision is used to code mortality data beginning with 1999.

### MISER

The Massachusetts Institute for Social and Economic Research. This research institute, which was located at the University of Massachusetts in Amherst, produced the official population estimates and projections for the Department of Public Health through 1999.

### OCCURRENCE DEATH

Occurrence deaths include all deaths that occur within the state, including deaths of non-residents. An interstate exchange agreement among the 50 states and Canada provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

### RACE

For death records, race is provided by the death record informant (for example, spouse or next of kin).

### RESIDENT DEATH

The death of a person whose usual place of residence or permanent address (as reported by the informant) is in one of the 351 cities or towns of Massachusetts, regardless of where the death took place. Unless otherwise noted, all data in this publication are resident data.

An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

#### UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See the Appendix for the Death Certificate.

#### RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100,000$
----------------------------	---

CAUSE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100,000$
------------------------------	--

CRUDE DEATH RATE	$\frac{\text{Number of Resident Deaths in a Year}}{\text{Total Population}} \times 100,000$
---------------------	---

**ICD-10 and ICD-9 Codes Used in this Publication**  
(Sorted Cause of Death)

<u>Cause of Death</u>	<u>ICD-10 Code</u>	<u>ICD-9 Code</u>
Alzheimer's Disease	G30	331.0
Cancer (Malignant Neoplasms)	C00-C97	140-208
of bladder	C67	188
of cervix uteri	C53	180
of colon, rectum, and anus	C18-C21	153-154, 159.9
of corpus uteri and uterus, part unspecified	C54-C55	179,182
of esophagus	C15	150
of female breast	C50	174
Hodgkin's Disease	C81	201
of kidney and renal pelvis	C64-C65	189.0-189.1
Leukemia	C91-C95	202.4, 204-208
of meninges, brain & other parts of central nervous system	C70-C72	191-192
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203
Non-Hodgkin's lymphoma	C82-C85	200, 202 (except 202.4)
of ovary	C56	183.0
of prostate	C61	185
of stomach	C16	151
of pancreas	C25	157
of trachea, bronchus and lung	C33-C34	162
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-779
Chronic liver disease and cirrhosis	K70, K73-K74	571
Chronic lower respiratory diseases <sup>1</sup>	J40-J47	490-496
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759
Diabetes Mellitus	E10-E14	250
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y98	E800-E999
Homicide	X85-Y09, Y87.1	E960-E969
Injuries of undetermined intent	Y10-Y34, Y87.2, Y89.9	E980-E989
Suicide	X60-X84, Y87.0	E950-E959
Accidents (Unintentional Injuries)	V01-X59	E800-E949
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0- V82.1, V83-V86, V87.0-V87.8, V88.0- V88.8, V89.0, V89.2	E810-E825 E850-E869, E880-E928, E929.2- E929.9
Unintentional non-transport injuries	W00-X59, Y86	
Heart Disease	I00-I09, I11, I13, I20-I51	390-398, 402, 404-429
Infectious and parasitic diseases	A00-B99	001-139
Human Immunodeficiency Virus (HIV) disease (AIDS)	B20-B24	042-044
Septicemia	A40-A41	038
Influenza and pneumonia	J10-J18	480-487
Nephritis	N00-N07, N17-N19, N25-N27	580-589
Stroke (Cerebrovascular disease)	I60-I69	430-438
Signs and symptoms	R00-R99	780-797, 798.1-798.9, 799
Sudden infant death syndrome (SIDS)	R95	798.0
Terrorism	U01-U02 (homicide), U03 (suicide)	--

1. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

## ICD-10 Injury Codes Used in this Publication

<u>Cause of Death</u>	<u>ICD-10 Code</u>
Suicide	X60-X84, Y87.0
Poisoning	X60-X69
Hanging, strangulation or suffocation	X70
Firearm	X72-X74
Other and unspecified	Residual
Homicide	X85-Y09, Y87.1
Firearm	Y93-Y95
Cut or pierce	X99
Other and unspecified	Residual
Unintentional Injuries (Accidents)	V01-X59, Y85-Y86
Falls	W00-W19
Hanging, strangulation or suffocation	W75-W84
Drowning or submersion	W65-W74
Smoke, fire and flames	X00-X19
Poisoning	X40-X49
Firearm	W32-W34
Motor Vehicle-related	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Injury to pedestrian	V02-V04, V09.0, V09
Injury to pedal cyclist	V12-V14, V19.0, V19.2, V19.4, V19.5, V19.6
Injury to motorcyclist	V20-V29
Injury to occupant	V30-V79, V80.3, V80.4, V80.5, V81.0, V81.1, V82.0, V82.1, V83-V86
Other and unspecified	Residual
Other and unspecified	Residual
Events of Undetermined Intent	Y10-Y34, Y87.2, Y89.9
Poisoning	Y10-Y19
Drowning or submersion	Y21
Other and unspecified	Residual
Legal Intervention	Y35.-Y36, Y89.0, Y89.1
Firearm	Y35.0
Adverse Effects	Y40-Y59, Y60-Y84, Y88
Drugs	Y40-Y59, Y88.0
Medical Care	Y60-Y84, Y88.1, Y88.2, Y88.3
Terrorism	U01-U02 (homicide), U03 (suicide)

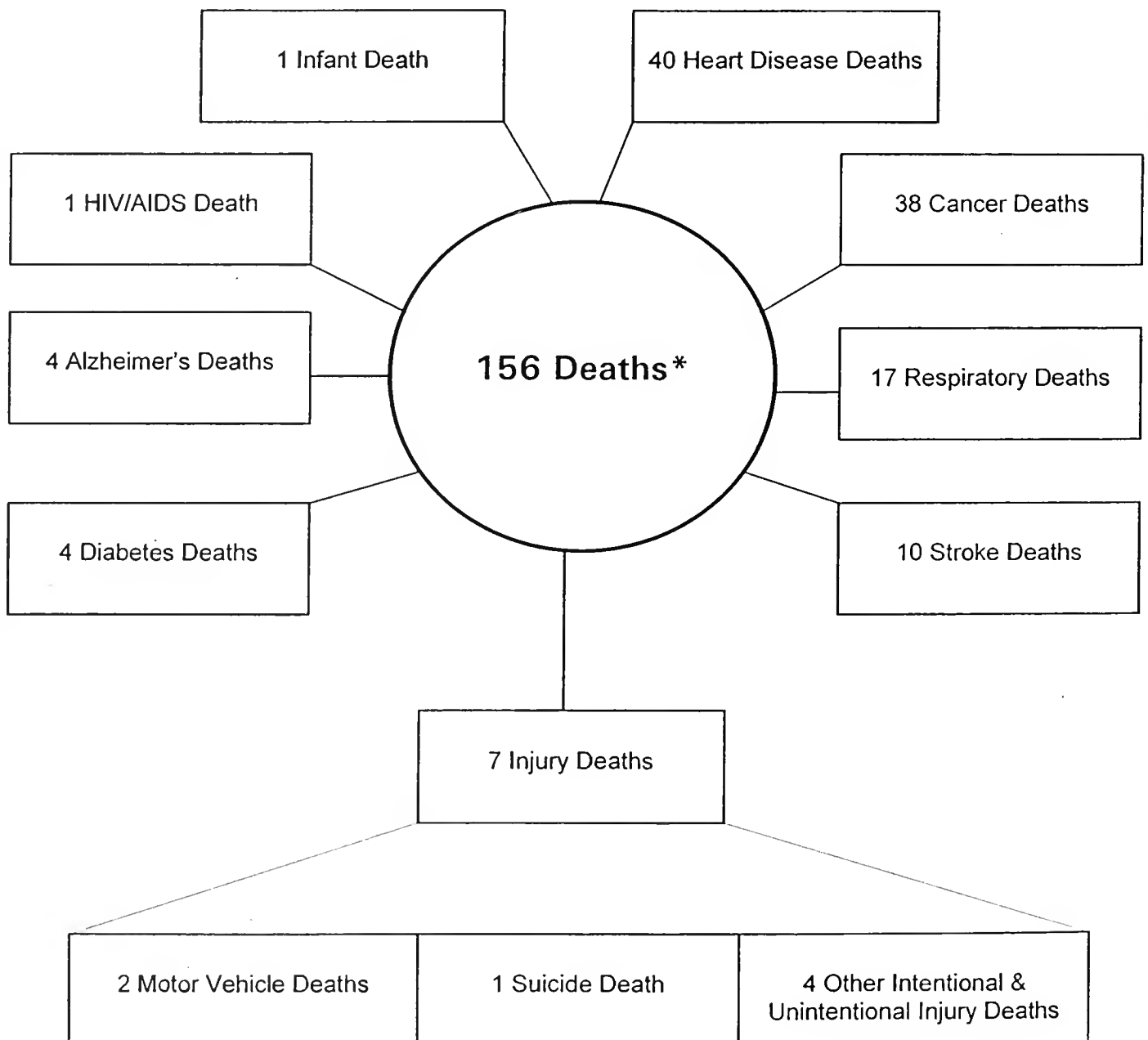
## ICD-10 Poisoning Codes Used in this Publication

<u>Manner of Death</u>	<u>ICD-10 Code</u>
<b>All Poisoning Deaths</b>	X40-X49, X60-X69, X85-X90, Y87.0, Y10-Y19, Y35.2
Narcotics and psychodysleptics	X42, X62, Y12
Other and unspecified drugs, medicaments, biological substances	X44, X64, X89, Y14
Antiepileptic, sedative-hypnotic, antiparkinsonism & psychotropic	X41, X61, Y11
Gases and vapours	X47, X67, X86, X88, Y17, Y35.2
Nonopioid analgesics, antipyretics & antirheumatics	X40, X60, Y10
Alcohol	X45, X65, Y15
Organic solvents and halogenated hydrocarbons	X46, X66, Y16
Other drugs acting on autonomic nervous system	X43, X63, Y13
Other and unspecified chemicals and noxious substances	Remaining causes

**Figure C-1**

**Daily Death Statistics  
Massachusetts: 2002**

Every day in 2002, residents of Massachusetts experienced an average of the following:



\*includes 34 deaths due to other causes



Table C-1. Trends in Mortality Characteristics, Massachusetts: 1992 - 2002

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Resident deaths<sup>1</sup></b>											
Number	53,804	55,557	54,914	55,296	55,187	54,634	55,204	55,763	56,591	56,733	56,881
Crude rate <sup>2,3,4</sup>	891.2	916.2	899.2	900.2	892.4	877.3	877.5	881.9	891.3	893.6	895.9
Age-adjusted rate <sup>5</sup>	877.4	885.7	868.2	866.2	853.0	834.8	808.8	808.8	816.5	818.2	819.9
<b>Race/ethnicity of decedent<sup>6,7</sup></b>											
<b>White non-Hispanic</b>											
Number	50,815	52,371	51,600	51,785	51,917	51,398	51,829	52,282	52,959	52,792	52,839
Percent <sup>8</sup>	94.4	94.3	94.0	93.7	94.1	94.1	93.9	93.8	93.6	93.1	92.9
Age-adjusted rate	875.5	882.8	864.2	860.1	852.2	835.1	808.5	808.7	816.2	813.5	813.7
<b>Black non-Hispanic</b>											
Number	1,957	1,969	2,079	2,136	2,025	2,033	1,969	2,018	2,109	2,226	2,275
Percent	3.6	3.5	3.8	3.9	3.7	3.7	3.6	3.6	3.7	3.9	4.0
Age-adjusted rate	1,139.2	1,115.3	1,176.7	1,193.0	1,141.1	1,142.1	1,076.6	995.2	992.4	1,049.6	1,066.6
<b>Asian non-Hispanic</b>											
Number	284	360	335	403	398	403	413	449	467	510	531
Percent	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9
Age-adjusted rate	463.8	613.4	521.2	565.2	534.5	512.0	500.7	422.4	418.5	452.4	487.2
<b>Hispanic</b>											
Number	712	813	865	936	803	749	924	975	1,014	1,059	1,166
Percent	1.3	1.5	1.6	1.7	1.5	1.4	1.7	1.7	1.8	1.9	2.0
Age-adjusted rate	440.5	488.5	482.7	504.7	430.0	391.0	463.8	507.8	596.0 <sup>9</sup>	616.2	708.4
<b>Gender of decedent<sup>7</sup></b>											
<b>Female</b>											
Number	27,770	29,109	28,733	29,262	29,152	29,261	29,568	29,786	30,465	30,780	30,427
Age-adjusted rate	711.1	724.5	712.6	717.6	702.7	699.0	678.0	676.9	691.6	697.8	688.5
<b>Male</b>											
Number	26,034	26,448	26,181	26,034	26,035	25,373	25,635	25,977	26,126	25,953	26,454
Age-adjusted rate	1,130.2	1,123.5	1,096.9	1,080.6	1,074.0	1,035.0	1,000.8	1,001.6	996.7	988.5	1,012.7
<b>Age of decedent<sup>7</sup></b>											
<1 year	569	523	499	419	403	425	414	418	377	407	397
1-14 years	225	239	192	204	197	174	128	165	181	169	167
15-24 years	470	464	473	452	434	422	413	407	403	444	460
25-44 years	3,062	3,055	3,210	3,196	2,720	2,348	2,373	2,397	2,375	2,571	2,490
45-64 years	7973	7,920	7,766	7,611	7,477	7,416	7,501	7,431	7,841	8,004	8,344
65-74 years	11,515	11,509	11,394	10,858	10,711	10,286	10,216	9,782	9,746	9,323	8,922
75-84 years	15,912	16,346	16,092	16,497	16,839	16,884	16,946	17,397	17,554	17,416	17,262
85+ years	14,076	15,494	15,283	16,054	16,400	16,677	17,213	17,765	18,113	18,395	18,838

1. Deaths presented in all tables and figures are resident deaths. 2. Deaths per 100,000 residents. 3. See Section Definitions for further explanation of terms and rates. 4. Rate calculations are based on resident population estimates from MISER for 1991-1995 (released in September 1999), 1996-1997 (released in November 1999), and 1998 (released in September 2000). Resident death rates for 1999 have been recalculated using 1999 population estimates. 2000-2002 rates are calculated using 2000 population estimates. 5. Rates are age-adjusted per 100,000 residents using the 2000 US standard population. 6. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 7. Column sum may not equal total because the race, gender or age of some decedents was unknown. 8. Percent of all resident deaths in that year.

Figure C-2

Expected Years of Life Remaining at Different Ages by  
Race/Hispanic Ethnicity, Massachusetts: 2002

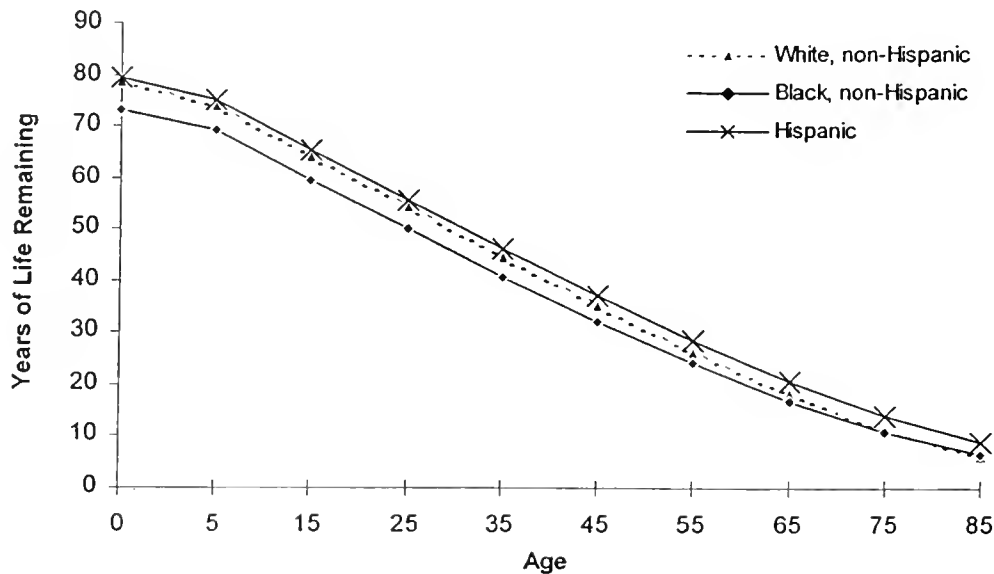


Table C-2. Years of Life Remaining<sup>1</sup>, Massachusetts: 2002

At Age:	White non-Hispanic		Black non-Hispanic		Hispanic		White non-Hispanic		Black non-Hispanic		Hispanic	
	All	Females	Females	Females	Females	Males	Males	Males	Males	Males	Males	Males
Birth	78.4	80.8	81.0	76.1	82.8	75.7	76.0	69.9	75.9			
1 year old	77.8	80.1	80.3	76.1	82.3	75.1	75.4	69.9	75.5			
5 years old	73.9	76.2	76.3	72.3	78.4	71.2	71.4	66.1	71.7			
15 years old	63.9	66.3	66.4	62.5	68.5	61.2	61.4	56.2	61.8			
25 years old	54.2	56.5	56.5	52.7	58.7	51.7	51.9	47.3	52.3			
35 years old	44.6	46.7	46.8	43.1	48.9	42.2	42.3	38.2	43.1			
45 years old	35.3	37.2	37.2	33.9	39.6	33.0	33.1	29.5	34.4			
55 years old	26.4	28.1	28.1	25.7	30.5	24.4	24.4	22.0	26.1			
65 years old	18.4	19.8	19.8	18.1	22.5	16.6	16.6	15.1	18.9			
75 years old	11.5	12.3	12.3	11.7	14.9	10.1	10.0	9.6	12.7			
85 years old	6.2	6.6	6.6	6.8	9.1	5.3	5.2	6.3	8.9			

1. Years of Life Remaining calculated using the Greville Abridged Life Table Method. (Source: Dublin LI. Length of Life - A Study of the Life Table. Ronald Press Co. New York. 1949.) DPH 2000 Preliminary Population Estimates (released January 2002) are used as the denominator.

**Table C-3. Five Leading Causes of Death<sup>1</sup> Comparability Unmodified and Comparability Modified Age-Adjusted Rates  
Massachusetts and United States: 1992-2002**

Year <sup>2</sup>	Heart Disease				Cancer				Stroke			
	MA		US		MA		US		MA		US	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>
1992	Rate 277.4	NA <sup>6</sup>	310.5	NA <sup>6</sup>	234.2	NA <sup>6</sup>	212.3	NA <sup>6</sup>	53.7	NA <sup>6</sup>	62.1	NA <sup>6</sup>
	% of Total 31.7		33.5		26.3		23.7		6.2		6.6	
1993	Rate 278.3	NA <sup>6</sup>	314.6	NA <sup>6</sup>	228.1	NA <sup>6</sup>	212.5	NA <sup>6</sup>	52.8	NA <sup>6</sup>	63.2	NA <sup>6</sup>
	% of Total 31.7		33.3		25.2		23.1		6.1		6.6	
1994	Rate 265.3	261.5	304.5	253.2	224.7	226.3	211.0	212.4	51.7	54.7	63.3	60.1
	% of Total 30.8		32.7		25.3		23.2		6.1		6.7	
1995	Rate 259.4	255.7	301.3	250.1	225.6	227.2	209.6	211.0	52.9	55.9	63.9	61.3
	% of Total 30.2		32.4		25.4		23.1		6.3		6.8	
1996	Rate 257.1	253.4	293.4	243.8	221.2	222.7	206.7	208.1	50.5	53.4	63.2	61.0
	% of Total 30.4		32.2		25.2		23.1		6.1		6.9	
1997	Rate 249.0	245.5	285.7	237.2	215.4	216.8	203.7	205.1	50.6	53.5	61.8	60.1
	% of Total 30.2		32.0		25.0		23.1		6.2		6.9	
1998	Rate 231.0	227.7	272.4	269.7	209.0	210.4	202.4	204.4	47.1	49.7	59.5	63.1
	% of Total 29.0		31.6		25.0		23.0		6.0		6.8	
1999	Rate 222.1 <sup>7</sup>	222.1 <sup>7</sup>	265.9		206.6 <sup>7</sup>		201.6		50.2 <sup>7</sup>		61.4	
	% of Total 27.9		30.3		24.8		23.0		6.4		7.0	
2000	Rate 218.0 <sup>7</sup>	218.0 <sup>7</sup>	258.2		206.9 <sup>7</sup>		200.9		51.2 <sup>7</sup>		60.9	
	% of Total 27.1		29.5		24.8		23.0		6.4		6.9	
2001	Rate 215.2 <sup>7</sup>	215.2 <sup>7</sup>	247.7		202.8 <sup>7</sup>		195.8		49.7 <sup>7</sup>		57.9	
	% of Total 26.7		28.9		24.2		22.9		6.2		6.8	
2002	Rate 209.0 <sup>7</sup>	209.0 <sup>7</sup>	240.4 <sup>8</sup>		205.0 <sup>7</sup>		194.0 <sup>8</sup>		50.0 <sup>7</sup>		56.3 <sup>8</sup>	
	% of Total 26.0		28.4		24.0		22.8		6.0		6.7	

1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. 1990-1998 date coded according to ICD-9. 1999-2001 data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Section Definitions. 3. Comparability Unmodified Rate: this rate has not been modified to account for changes from ICD-9 to ICD-10. 4. Comparability Modified Rate: this rate is adjusted using the preliminary comparability ratio (CR) from NCHS, February 2001 in order to account for changes from ICD-9 to ICD-10. Please see Appendix for a more detailed explanation and for a list of CR used in this report. 5. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. US data for years 1990-1998 obtained from Compressed Mortality File on CDC Wonder, February 2001. 6. NA: comparability ratio is not applicable for years prior to 1994. 7. When comparing data over time between 1994 through 2002, please use the comparability modified rates for years 1994-1998. 8. US data for 2001 obtained from NCHS. Deaths: Preliminary Data for 2002. National Vital Statistics Report, Vol. 52, No. 13, February 11, 2004.

**Table C-3 (continued). Five Leading Causes of Death<sup>1</sup> Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts and United States: 1992-2002**

Year <sup>2</sup>	Influenza/Pneumonia						Unintentional Injuries						All Causes	
	MA			US			MA			US			MA	US
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	NA <sup>6</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	NA <sup>6</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	NA <sup>6</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	NA <sup>6</sup>		
1992	Rate	38.5	NA <sup>6</sup>	32.7	3.4	NA <sup>6</sup>	20.6	2.3	NA <sup>6</sup>	34.6	4.0	NA <sup>6</sup>	877.4	910.7
	% of Total	4.5												
1993	Rate	42.9	NA <sup>6</sup>	34.8	3.6	NA <sup>6</sup>	21.3	2.4	NA <sup>6</sup>	35.7	4.0	NA <sup>6</sup>	885.7	931.3
	% of Total	5.0												
1994	Rate	40.4	28.2	33.4	3.5	23.3	20.7	2.4	20.6	35.7	4.0	35.1	868.2	920.0
	% of Total	4.8												
1995	Rate	41.2	28.7	33.5	3.6	23.4	18.8	2.1	18.8	36.0	4.0	35.4	866.2	918.4
	% of Total	4.9												
1996	Rate	41.5	29.0	32.9	3.6	23.0	19.5	2.3	19.5	36.2	4.1	35.6	853.0	902.1
	% of Total	5.1												
1997	Rate	39.1	27.3	33.3	3.7	23.3	19.7	2.3	19.7	36.0	4.1	35.3	834.8	887.0
	% of Total	4.9												
1998	Rate	40.2	28.1	34.6	3.9	24.2	19.9	2.3	19.8	35.0	4.2	36.1	808.8	875.4
	% of Total	5.2												
1999	Rate	30.3 <sup>7</sup>	23.4	19.3 <sup>7</sup>	35.9		808.8		881.9					
	% of Total	3.9	2.7	2.3	4.1									
2000	Rate	29.3 <sup>7</sup>	23.7	23.7			20.3 <sup>7</sup>			35.6			816.5	872.0
	% of Total	3.7	2.8				2.4			3.9				
2001	Rate	24.6 <sup>7</sup>	21.8	21.8			22.3 <sup>7</sup>			34.3			818.2	855.0
	% of Total	3.1	2.6				2.6			4.0				
2002	Rate	29.0 <sup>7</sup>	22.7 <sup>8</sup>	22.7 <sup>8</sup>			21.0 <sup>7</sup>			35.3 <sup>8</sup>			819.9	846.8
	% of Total	4.0	2.7				2.0			4.2				

1. Cause of death; the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. 1990-1998 data coded according to ICD-9. 1999-2002 data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Section Definitions. 3. Comparability Unmodified Rate; this rate has not been modified to account for changes from ICD-9 to ICD-10. 4. Comparability Modified Rate; this rate is adjusted using the preliminary comparability ratio (CR) from NCHS, February 2001 in order to account for changes from ICD-9 to ICD-10. 5. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. US data for years 1990-1998 obtained from Compressed Mortality File on CDC Wonder, February 2001. 6. NA: comparability ratio is not applicable for years prior to 1994. 7. When comparing data over time between 1994 through 2002, please use the comparability modified rate for years 1994-1998. 8. US data for 2001 obtained from NCHS. Deaths: Preliminary Data for 2002. National Vital Statistics Report, Vol. 52, No. 13, February 11, 2004.

**Table C-4A. Leading Causes of Death\*, Numbers and Age-Specific Rates by Gender, Massachusetts: 2002**

Age	Cause of Death <sup>1</sup>	<u>Total</u>		<u>Female</u>		<u>Male</u>	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
1 – 14 years	<b>TOTAL</b>	<b>167</b>	<b>14.2</b>	<b>68</b>	<b>11.8</b>	<b>99</b>	<b>16.4</b>
	Unintentional Injuries	30	2.5	10	1.7	20	3.3
	Cancer	24	2.0	9	1.6	15	2.5
	Congenital Malformations	15	1.3	5	0.9	10	1.7
	Signs and Symptoms	12	1.0	5	0.9	7	1.2
15 – 24 years	<b>TOTAL</b>	<b>460</b>	<b>56.1</b>	<b>116</b>	<b>28.2</b>	<b>344</b>	<b>84.1</b>
	Unintentional Injuries	166	20.2	43	10.5	123	30.1
	Homicide	63	7.7	4	-- <sup>5</sup>	59	14.4
	Suicide	53	6.5	9	2.2	44	10.8
	Injuries of Undetermined Intent	53	6.5	14	3.4	39	9.5
25 – 44 years	<b>TOTAL</b>	<b>2,490</b>	<b>125.1</b>	<b>851</b>	<b>84.1</b>	<b>1,639</b>	<b>167.6</b>
	Cancer	427	21.5	223	22.0	204	20.9
	Injuries of Undetermined Intent	339	17.0	102	10.1	237	24.2
	Unintentional Injuries	280	14.1	77	7.6	203	20.8
	Heart Disease	267	13.4	69	6.8	198	20.2
45 – 64 years	<b>TOTAL</b>	<b>8,344</b>	<b>587.7</b>	<b>3,322</b>	<b>451.9</b>	<b>5,022</b>	<b>733.6</b>
	Cancer	3,087	217.4	1,529	208.0	1,558	227.6
	Heart Disease	1,754	123.5	486	66.1	1,268	185.2
	Chronic Lower Respiratory Disease <sup>3</sup>	279	19.7	146	19.9	133	19.4
	Chronic Liver Disease	275	19.4	87	11.8	188	27.5
65 + years <sup>4</sup>	<b>TOTAL</b>	<b>45,022</b>	<b>5,234.1</b>	<b>25,906</b>	<b>4,995.2</b>	<b>19,116</b>	<b>5,597.0</b>
	Heart Disease	12,646	1,470.2	7,259	1,399.7	5,387	1,577.3
	Cancer	10,328	1,200.7	5,258	1,013.8	5,070	1,484.5
	Stroke	3,271	380.3	2,087	402.4	1,184	346.7
	Chronic Lower Respiratory Disease <sup>3</sup>	2,432	282.7	1,395	269.0	1,037	303.6

1. Cause of Death classified using ICD-10. See Section Definitions for ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. See Table C-4B for leading causes of death for detailed age groups for persons ages 65+ years. 5. Calculations based on fewer than 5 events are excluded.

\* Ranking based on number of deaths for all persons 1 year of age and older.

**Table C-4B. Leading Causes of Death, Numbers and Age-Specific Rates (Ages 65 and older) by Gender, Massachusetts: 2002**

Age	Cause of Death <sup>1</sup>	<u>Total</u>		<u>Female</u>		<u>Male</u>	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
65 – 74 years	<b>TOTAL</b>	<b>8,922</b>	<b>2,085.4</b>	<b>3,902</b>	<b>1,642.7</b>	<b>5,020</b>	<b>2,638.0</b>
	Cancer	3,442	804.5	1,592	670.2	1,850	972.2
	Heart Disease	2,055	480.3	779	328.0	1,276	670.5
	Chronic Lower Respiratory Disease <sup>3</sup>	556	130.0	288	121.2	268	140.8
	Stroke	407	95.1	180	75.8	227	119.3
	<b>TOTAL</b>	<b>17,262</b>	<b>5,468.9</b>	<b>9,019</b>	<b>4,616.9</b>	<b>8,243</b>	<b>6,852.4</b>
75 – 84 years	Heart Disease	4,526	1,433.9	2,274	1,164.1	2,252	1,872.1
	Cancer	4,494	1,423.8	2,253	1,153.3	2,241	1,863.0
	Stroke	1,238	392.2	708	362.4	530	440.6
	Chronic Lower Respiratory Disease <sup>3</sup>	1,106	350.4	597	305.6	509	423.1
	<b>TOTAL</b>	<b>18,838</b>	<b>16,143.4</b>	<b>12,985</b>	<b>15,143.9</b>	<b>5,853</b>	<b>18,912.4</b>
	Heart Disease	6,065	5,197.4	4,206	4,905.3	1,859	6,006.9
85+ years	Cancer	2,392	2,049.8	1,413	1,647.9	979	3,163.4
	Stroke	1,626	1,393.4	1,199	1,398.3	427	1,379.7
	Influenza and Pneumonia	1,123	962.4	763	889.9	385	1,244.0
	<b>TOTAL</b>	<b>18,838</b>	<b>16,143.4</b>	<b>12,985</b>	<b>15,143.9</b>	<b>5,853</b>	<b>18,912.4</b>

1. Cause of Death classified according to ICD-10. See Section Definitions for ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Figure C-3

Trends in Deaths from Selected Causes,  
Massachusetts: 1842-2002

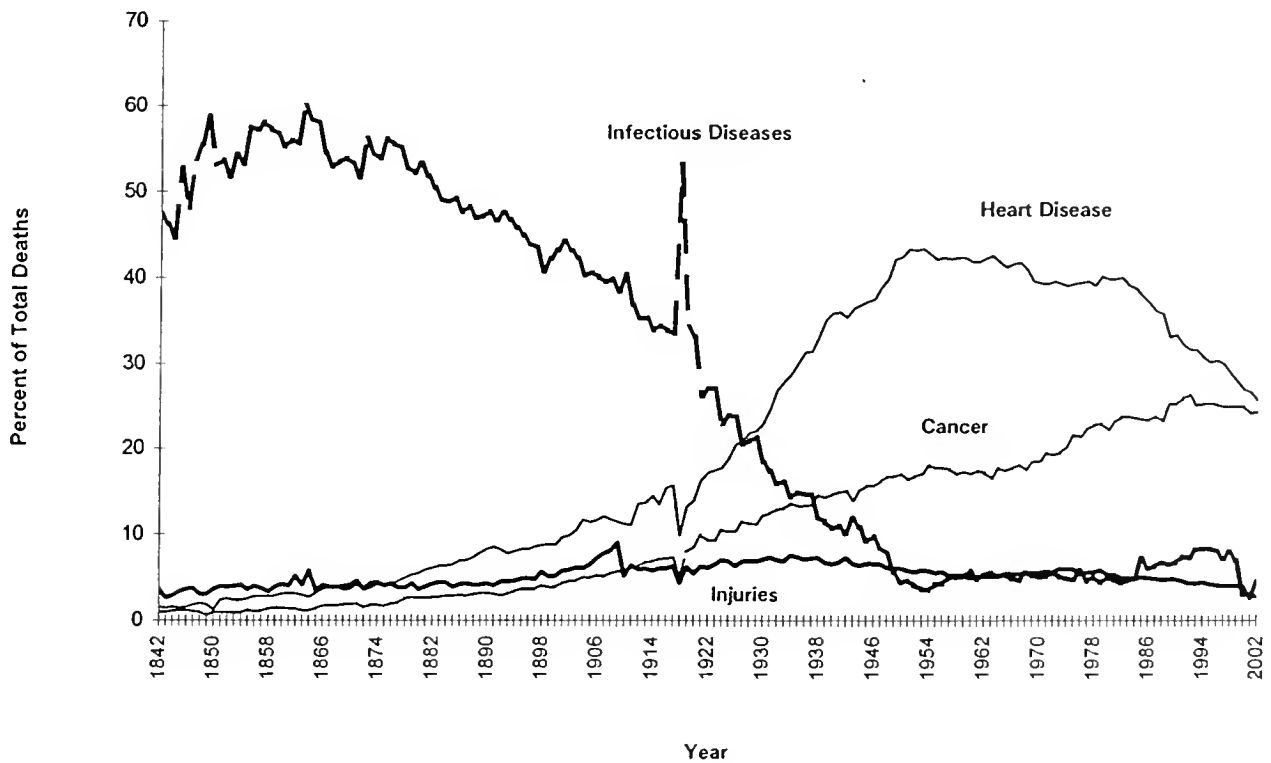


Table C-5. Leading Causes of Death<sup>1</sup> and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 2002

Cause <sup>3</sup>	<u>White non-Hispanic<sup>2</sup></u>			<u>Black non-Hispanic<sup>2</sup></u>			<u>Asian non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
	#	Rate <sup>4</sup>	Cause	#	Rate	Cause	#	Rate	Cause	#	Rate	Cause
Total	52,839	813.7	Total	2,275	1,066.6	Total	531	487.2	Total	1,166	708.4	Total
Heart Disease	13,915	209.5	Cancer	534	254.7	Cancer	161	138.6	Cancer	209	143.2	Cancer
Cancer	12,983	205.8	Heart Disease	464	236.2	Heart Disease	97	99.5	Heart Disease	205	160.1	Heart Disease
Stroke	3,338	49.4	Stroke	126	67.9	Stroke	33	31.4	Unintentional Injuries <sup>6</sup>	70	24.7	Unintentional Injuries <sup>6</sup>
Chronic Lower Resp. Disease <sup>5</sup>	2,633	40.2	Diabetes	96	47.5	Unintentional Injuries <sup>6</sup>	24	17.3	Diabetes	64	47.8	Diabetes
Influenza and Pneumonia	1,959	28.7	Nephritis	78	38.6	Diabetes	18	20.4	Stroke	56	46.9	Stroke
Alzheimer's Disease	1,542	22.2	Homicide	70	18.7	Chronic Lower Resp. Disease <sup>5</sup>	18	19.2	HIV/AIDS	52	15.4	HIV/AIDS
Unintentional Injuries <sup>6</sup>	1,247	20.8	Unintentional Injuries <sup>6</sup>	69	25.2	Influenza and Pneumonia	16	20.8	Injuries of Undetermined Intent	46	11.6	Injuries of Undetermined Intent
Diabetes	1,238	19.3	HIV/AIDS	68	23.1	Suicide	15	8.2	Perinatal Conditions	42	6.5	Perinatal Conditions
Nephritis	1,180	17.8	Signs and Symptoms	65	23.6	Nephritis	14	19.1	Chronic Lower Resp. Disease <sup>5</sup>	40	30.6	Chronic Lower Resp. Disease <sup>5</sup>
Septicemia	938	14.4	Chronic Lower Resp. Disease <sup>5</sup>	53	26.5	Perinatal Conditions	11	4.2	Signs and Symptoms	37	11.6	Signs and Symptoms

Total

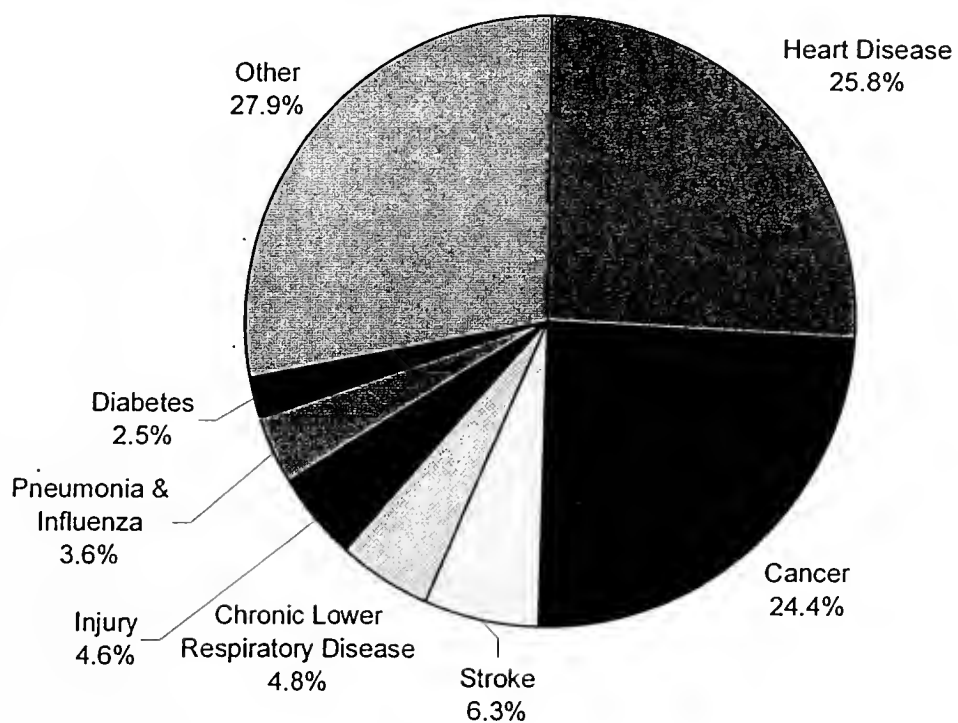
Cause	#	Rate
Total	56,881	819.9
Heart Disease	14,694	208.8
Cancer	13,899	204.9
Stroke	3,557	50.0
Chronic Lower Respiratory Disease <sup>5</sup>	2,744	39.5
Influenza and Pneumonia	2,050	28.5
Alzheimer's Disease	1,587	21.8
Diabetes	1,418	20.7
Unintentional Injuries <sup>6</sup>	1,411	21.0
Nephritis	1,292	18.4
Septicemia	1,015	14.6

1. Ranking based on number of deaths. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. Underlying Cause of Death based on ICD-10 (Please refer to Section Definitions for list of ICD-10 codes used). 4. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 6. Unintentional Injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur.



Figure C-4

Percent Distribution of Leading Causes of Death<sup>1</sup>  
Massachusetts: 2002



<sup>1</sup>Total Number of Deaths = 56,880  
Causes of Death are classified according to ICD-10

Table C-6A. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2002

Selected Causes <sup>2</sup>	<u>Total</u>		<u>White non-Hispanic<sup>1</sup></u>		<u>Black non-Hispanic<sup>1</sup></u>		<u>Asian non-Hispanic<sup>1</sup></u>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Age: 1-14, TOTAL</b>	167	14.2	99	10.7	29	35.2	5	10.4	34	27.0
Unintentional Injuries <sup>4</sup>	30	2.5	15	1.6	8	9.7	0	0.0	7	5.6
Cancer	24	2.0	16	1.7	4	-- <sup>5</sup>	1	-- <sup>5</sup>	3	-- <sup>5</sup>
Congenital malformations	15	1.3	10	1.1	2	-- <sup>5</sup>	0	0.0	3	-- <sup>5</sup>
Signs and symptoms of ill defined conditions	12	1.0	7	0.8	2	-- <sup>5</sup>	0	0.0	3	-- <sup>5</sup>
<b>Age: 15-24, TOTAL</b>	460	56.1	330	52.0	70	128.3	12	26.2	45	53.9
Unintentional Injuries <sup>4</sup>	166	20.2	136	21.4	15	27.5	3	-- <sup>5</sup>	12	14.4
Homicide	63	7.7	15	2.4	29	53.1	4	-- <sup>5</sup>	14	16.8
Suicide	53	6.5	41	6.5	6	11.0	4	-- <sup>5</sup>	2	-- <sup>5</sup>
Injuries of Undetermined Intent <sup>6</sup>	53	6.5	45	7.1	5	9.2	1	-- <sup>5</sup>	2	-- <sup>5</sup>
<b>Age: 25-44, TOTAL</b>	2,490	125.1	1,950	119.1	246	222.3	48	50.4	240	167.6
Cancer	427	21.5	351	21.4	38	34.3	14	14.7	24	16.8
Injuries of Undetermined Intent <sup>6</sup>	339	17.0	283	17.3	19	17.2	3	-- <sup>5</sup>	34	23.7
Unintentional Injuries <sup>4</sup>	280	14.1	231	14.1	14	12.7	5	5.2	29	20.3
Heart Disease	267	13.4	211	12.9	30	27.1	4	-- <sup>5</sup>	22	15.4
<b>Age: 45-64, TOTAL</b>	8,344	587.7	7,280	576.0	609	1011.0	117	295.5	320	598.0
Cancer	3,087	217.4	2,785	220.3	173	287.2	52	131.3	74	138.3
Heart Disease	1,754	123.5	1,542	122.0	126	209.2	19	48.0	63	117.7
Chronic Lower Respiratory Disease <sup>7</sup>	279	19.7	253	20.0	13	21.6	3	-- <sup>5</sup>	10	18.7
Chronic Liver Disease	275	19.4	240	19.0	9	14.9	4	-- <sup>5</sup>	22	41.1
<b>Age: 65+, TOTAL<sup>8</sup></b>	45,022	5234.1	42,940	5307.8	1,247	5329.1	333	2541.6	460	3332.6
Heart Disease	12,646	1470.2	12,143	1501.0	305	1303.4	74	564.8	115	833.2
Cancer	10,328	1200.7	9,808	1212.4	313	1337.6	94	717.4	104	753.5
Stroke	3,271	380.3	3,112	384.7	99	423.1	22	167.9	34	246.3
Chronic Lower Respiratory Disease <sup>7</sup>	2,432	282.7	2,359	291.6	37	158.1	14	106.9	22	159.4

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. Unintentional injuries include injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur. 5. Calculations based on fewer than five events are excluded. 6. Injuries of undetermined intent include deaths from falls, fires, drownings, and drug overdoses, where the investigation has not determined whether the injuries were accidental or purposely inflicted. 7. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 8. Please see Table C-6B for causes of death for detailed age groups for persons ages 65+ years.

**Table C-6B. Number and Age-Specific Rates for Selected Causes of Death, Persons age 65+ by Race and Hispanic Ethnicity, Massachusetts: 2002**

Selected Causes <sup>2</sup>	<u>Total</u>		<u>White non-Hispanic<sup>1</sup></u>		<u>Black non-Hispanic<sup>1</sup></u>		<u>Asian non-Hispanic<sup>1</sup></u>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Age: 65-74, TOTAL</b>	<b>8,922</b>	<b>2085.4</b>	<b>8,234</b>	<b>2076.9</b>	<b>408</b>	<b>2987.7</b>	<b>104</b>	<b>1236.8</b>	<b>160</b>	<b>1815.1</b>
Cancer	3,442	804.5	3,215	810.9	133	973.9	40	475.7	50	567.2
Heart Disease	2,055	480.3	1,907	481.0	90	659.1	20	237.8	34	385.7
Chronic Lower Respiratory Disease <sup>4</sup>	556	130.0	533	134.4	15	109.8	3	-- <sup>5</sup>	5	56.7
Stroke	407	95.1	361	91.1	29	212.4	8	95.1	9	102.1
<b>Age: 75-84, TOTAL</b>	<b>17,262</b>	<b>5468.9</b>	<b>16,452</b>	<b>5475.9</b>	<b>489</b>	<b>6591.2</b>	<b>142</b>	<b>3841.0</b>	<b>168</b>	<b>4424.5</b>
Heart Disease	4,526	1433.9	4,328	1440.5	116	1563.6	37	1000.8	42	1106.1
Cancer	4,494	1423.8	4,280	1424.6	132	1779.2	37	1000.8	41	1079.8
Stroke	1,238	392.2	1,185	394.4	34	458.3	7	189.3	11	289.7
Chronic Lower Respiratory Disease <sup>4</sup>	1,106	350.4	1,075	357.8	15	202.2	7	189.3	9	237.0
<b>Age: 85+, TOTAL</b>	<b>18,838</b>	<b>16143.4</b>	<b>18,254</b>	<b>16284.1</b>	<b>350</b>	<b>15053.8</b>	<b>87</b>	<b>8734.9</b>	<b>132</b>	<b>11083.1</b>
Heart Disease	6,065	5197.4	5,908	5270.4	99	4258.1	17	1706.8	39	3274.6
Cancer	2,392	2049.8	2,313	2063.4	48	2064.5	17	1706.8	13	1091.5
Stroke	1,626	1393.4	1,566	1397.0	36	1548.4	7	702.8	14	1175.5
Influenza and Pneumonia	1,123	962.4	1,089	971.5	20	860.2	7	702.8	6	503.8

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 5. Calculations based on fewer than five events are excluded.

**Table C-7. Heart Disease and Cancer Deaths by Race and Gender,  
Comparability Unmodified and Comparability Modified Age-Adjusted Rates,<sup>1</sup> Massachusetts: 1996-2002**

**Heart Disease**

Year	<u>White non-Hispanic<sup>2</sup></u>						<u>Black non-Hispanic<sup>2</sup></u>					
	<u>Male</u>			<u>Female</u>			<u>Male</u>			<u>Female</u>		
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1996	337.0	332.2	207.0	204.1	260.5	256.8	340.0	335.2	234.4	231.1	281.2	277.2
1997	323.5	318.9	202.3	199.4	252.1	248.5	356.3	351.2	238.5	235.1	291.3	287.2
1998	300.0	295.7	186.6	184.0	233.2	229.9	357.2	352.1	242.8	239.4	286.9	282.8
1999 <sup>5</sup>		289.8 <sup>6</sup>		178.4 <sup>6</sup>	224.3 <sup>6</sup>		296.5 <sup>6</sup>		211.5 <sup>6</sup>		248.0 <sup>6</sup>	
2000 <sup>5</sup>		284.1 <sup>6</sup>		174.8 <sup>6</sup>	220.0 <sup>6</sup>		249.8 <sup>6</sup>		215.6 <sup>6</sup>		235.4 <sup>6</sup>	
2001 <sup>5</sup>		273.7 <sup>6</sup>		175.3 <sup>6</sup>	216.4 <sup>6</sup>		326.8 <sup>6</sup>		198.9 <sup>6</sup>		251.6 <sup>6</sup>	
2002 <sup>5</sup>		272.0 <sup>6</sup>		166.8 <sup>6</sup>	209.5 <sup>6</sup>		281.6 <sup>6</sup>		202.2 <sup>6</sup>		236.2 <sup>6</sup>	
<b><u>Asian non-Hispanic<sup>2</sup></u></b>												
Year	<u>Male</u>			<u>Female</u>			<u>Male</u>			<u>Female</u>		
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1996	153.9	151.7	86.9	85.7	115.2	113.6	135.9	134.0	78.9	77.8	102.6	101.1
1997	150.4	148.3	67.7	66.7	105.1	103.6	132.7	130.8	78.7	77.6	101.0	99.6
1998	150.6	148.5	98.5	97.1	121.0	119.3	114.0	112.4	71.3	70.3	91.3	90.0
1999 <sup>5</sup>		119.6 <sup>6</sup>		73.7 <sup>6</sup>	94.7 <sup>6</sup>		143.4 <sup>6</sup>		83.5 <sup>6</sup>		108.2 <sup>6</sup>	
2000 <sup>5</sup>		116.6 <sup>6</sup>		68.0 <sup>6</sup>	89.1 <sup>6</sup>		124.4 <sup>6,7</sup>		108.4 <sup>6,7</sup>		117.8 <sup>6,7</sup>	
2001 <sup>5</sup>		133.1 <sup>6</sup>		70.3 <sup>6</sup>	97.3 <sup>6</sup>		164.4 <sup>6</sup>		123.0 <sup>6</sup>		141.2 <sup>6</sup>	
2002 <sup>5</sup>		123.6 <sup>6</sup>		83.7 <sup>6</sup>	99.5 <sup>6</sup>		212.4 <sup>6</sup>		122.9 <sup>6</sup>		160.1 <sup>6</sup>	

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. Comparability Unmodified Rate: this rate has not been modified. 4. Comparability modified rate: this rate has been adjusted using the preliminary comparability ratio (CR) provided by the NCHS (February 2001). 5. 1999 and 2000 are coded according to ICD-10. 6. When comparing data over time between 1994 through 2000, please use the comparability modified rate for years 1994-1998. 7. The Census 2000 count for Hispanics 65+ years is lower than the number previously estimated. Thus, the death rate (the number of deaths divided by the population) is increased relative to past calculations.

**Table C-7 (continued). Heart Disease and Cancer Deaths by Race and Gender,  
Comparability Unmodified and Comparability Modified Age-Adjusted Rates,<sup>1</sup> Massachusetts: 1996-2002**

**Cancer**

Year	<u>White non-Hispanic<sup>2</sup></u>				<u>Black non-Hispanic<sup>2</sup></u>			
	<u>Male</u>		<u>Female</u>		<u>Male</u>		<u>Female</u>	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1996	283.8	285.7	187.0	188.3	361.6	364.1	243.1	244.8
1997	269.5	271.3	186.6	187.9	396.2	398.9	235.5	237.1
1998	264.1	265.9	177.8	179.0	380.2	382.8	218.1	219.6
1999 <sup>5</sup>	263.4 <sup>6</sup>		174.3 <sup>6</sup>		337.2 <sup>6</sup>		195.7 <sup>6</sup>	
2000 <sup>5</sup>	259.5 <sup>6</sup>		178.9 <sup>6</sup>		369.4 <sup>6</sup>		177.7 <sup>6</sup>	
2001 <sup>5</sup>	254.0 <sup>6</sup>		176.2 <sup>6</sup>		292.0 <sup>6</sup>		193.5 <sup>6</sup>	
2002 <sup>5</sup>	255.8 <sup>6</sup>		177.0 <sup>6</sup>		336.3 <sup>6</sup>		203.2 <sup>6</sup>	
Total								
			207.7 <sup>6</sup>				251.5 <sup>6</sup>	
			209.1 <sup>6</sup>				252.3 <sup>6</sup>	
			204.9 <sup>6</sup>				233.0 <sup>6</sup>	
			205.8 <sup>6</sup>				254.7 <sup>6</sup>	

**Asian non-Hispanic<sup>2</sup>**

Year	<u>Asian non-Hispanic<sup>2</sup></u>				<u>Hispanic</u>			
	<u>Male</u>		<u>Female</u>		<u>Male</u>		<u>Female</u>	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified	Comparability Unmodified	Comparability Modified
1996	192.7	194.0	156.6	157.7	136.5	137.4	54.6	55.0
1997	185.1	186.4	133.0	133.9	107.7	108.4	54.1	54.5
1998	143.5	144.5	103.7	104.4	160.2	161.3	89.5	90.1
1999 <sup>5</sup>	162.8 <sup>6</sup>		116.9 <sup>6</sup>		141.8 <sup>6</sup>		92.5 <sup>6</sup>	
2000 <sup>5</sup>	109.5 <sup>6</sup>		95.7 <sup>6</sup>		155.0 <sup>6,7</sup>		106.2 <sup>6,7</sup>	
2001 <sup>5</sup>	112.5 <sup>6</sup>		118.4 <sup>6</sup>		157.8 <sup>6</sup>		107.6 <sup>6</sup>	
2002 <sup>5</sup>	181.6 <sup>6</sup>		107.3 <sup>6</sup>		171.6 <sup>6</sup>		122.7 <sup>6</sup>	
Total								
			136.7 <sup>6</sup>				113.8 <sup>6</sup>	
			103.2 <sup>6</sup>				126.0 <sup>6,7</sup>	
			116.4 <sup>6</sup>				128.5 <sup>6</sup>	
			138.6 <sup>6</sup>				143.2 <sup>6</sup>	

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. Comparability Unmodified Rate: this rate has not been modified. 4. Comparability Modified Rate: this rate has been adjusted using the preliminary comparability ratio (CR) provided by the NCHS (February 2001). 5. 1999 and 2002 are coded according to ICD-10. 6. When comparing data over time between 1996 through 2002, please use the comparability modified rate for years 1994-1998. 7. The Census 2000 count for Hispanics 65+ years is lower than the number previously estimated. Thus, the death rate (the number of deaths divided by the population) is increased relative to past calculations.

**Table C-8. Number and Age-Adjusted Rates of Cancer Deaths by  
Selected Causes and Gender, Massachusetts: 2002**

Cause of Death <sup>1</sup>	ICD-10 Code	Total		Female		Male	
		#	Rate <sup>2,3</sup>	#	Rate	#	Rate
<b>Total Cancer Deaths</b>	<b>C00-C97</b>	<b>13,899</b>	<b>204.9</b>	<b>7,033</b>	<b>175.4</b>	<b>6,866</b>	<b>255.6</b>
Bladder	C67	361	5.2	144	3.3	217	8.4
Brain and nervous system	C70-C72	288	4.4	123	3.4	165	5.7
Cervix	C53	56	1.6	56	1.6	0	0.0
Colorectal	C18-C21	1,513	22.1	811	19.2	702	26.1
Esophagus	C15	363	5.4	78	1.8	285	10.3
Female breast	C50 <sup>4</sup>	1,054	27.0	1,054	27.0	0	0.0
Hodgkin's disease	C81	39	0.6	13	0.3	26	0.9
Kidney and other urinary organs	C64, C65	245	3.6	94	2.3	151	5.5
Leukemia	C91-C95	446	6.6	218	5.3	228	8.4
Lung	C33, C34	3,758	56.0	1,778	45.6	1,980	72.0
Melanoma of the skin	C43	184	2.7	69	1.8	115	4.2
Multiple myeloma	C88, C90	294	4.3	155	3.7	139	5.2
Non-Hodgkin's lymphoma	C82-C85	562	8.2	287	6.9	275	10.4
Ovary	C56	385	10.0	385	10.0	0	0.0
Pancreas	C25	799	11.8	419	10.2	380	14.0
Prostate	C61	721	29.5	0	0.0	721	29.5
Stomach	C16	350	5.1	166	3.9	184	6.8
Uterus	C54, C55	184	4.6	184	4.6	0	0.0
All other cancers	Residual	2,297	33.8	999	24.4	1,298	48.1

1. Common terms are used to describe the causes of cancer deaths. For detailed terminology of cancer sites, please refer to ICD-10 code list in the Section Definitions. 2. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. 3. The total resident population is used to calculate all "Total Rates" except for ICD-10 C50, C53-C56, which are based on the total female population, and ICD-10 C61, which is based on the total male population. 4. Includes only female breast cancer.

**Table C-9. Selected Causes of Cancer Deaths by Age, Massachusetts: 2002**

Age	Cause of Death <sup>1</sup>	ICD-10 Code	Number	Age-specific rate <sup>2</sup>
1 – 14 years	<b>TOTAL</b>		<b>24</b>	<b>2.0</b>
	Brain and nervous system	C70-C72	9	0.8
	Leukemia	C91-C95	5	0.4
	Non-Hodgkin's lymphoma	C82-C85	3	— <sup>3</sup>
15 – 24 years	<b>TOTAL</b>		<b>33</b>	<b>4.0</b>
	Leukemia	C91-C95	8	1.0
	Non-Hodgkin's lymphoma	C82-C85	3	— <sup>3</sup>
	Stomach	C16	2	— <sup>3</sup>
	Colorectal	C18-C21	2	— <sup>3</sup>
25 – 44 years	<b>TOTAL</b>		<b>427</b>	<b>21.5</b>
	Female breast <sup>4</sup>	C50	74	7.3
	Lung	C33, C34	59	3.0
	Brain and nervous system	C70-C72	37	1.9
	Colorectal	C18-C21	32	1.6
45 – 64 years	<b>TOTAL</b>		<b>3,087</b>	<b>217.4</b>
	Lung	C33, C34	903	63.6
	Female breast <sup>4</sup>	C50	329	44.8
	Colorectal	C18-C21	292	20.6
	Pancreas	C25	165	11.6
65 + years	<b>TOTAL</b>		<b>10,328</b>	<b>1,200.7</b>
	Lung	C33, C34	2,796	325.1
	Colorectal	C18-C21	1,187	138.0
	Prostate <sup>5</sup>	C61	676	197.9
	Female breast <sup>4</sup>	C50	651	125.5
65 – 74 years	<b>TOTAL</b>		<b>3,442</b>	<b>804.5</b>
	Lung	C33, C34	1,172	273.9
	Colorectal	C18-C21	315	73.6
	Pancreas	C25	202	47.2
	Female breast <sup>4</sup>	C50	189	79.6
75 – 84 years	<b>TOTAL</b>		<b>4,494</b>	<b>1,423.8</b>
	Lung	C33, C34	1,256	397.9
	Colorectal	C18-C21	527	167.0
	Prostate <sup>5</sup>	C61	299	248.6
	Pancreas	C25	270	85.5
85+ years	<b>TOTAL</b>		<b>2,392</b>	<b>2,049.8</b>
	Lung	C33, C34	368	315.4
	Colorectal	C18-C21	345	295.7
	Prostate <sup>5</sup>	C61	243	785.2
	Female breast <sup>4</sup>	C50	210	244.9

1. Common terms are used to describe causes of cancer death. For detailed terminology, please refer to the ICD-10 codes listed in the Section Definitions. 2. Number of deaths per 100,000 residents in each age group. 3. Calculations based on fewer than five events are excluded.

4. Calculation based on female population in specified age group. 5. Calculation based on male population in specified age group.

Table C-10. Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race and Hispanic Ethnicity, Massachusetts: 2002

Cause <sup>2</sup>	<u>White non-Hispanic<sup>1</sup></u>		<u>Black non-Hispanic<sup>1</sup></u>		<u>Asian non-Hispanic<sup>1</sup></u>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	Cause	#	Rate	Cause	#	Rate
Lung	3,551	57.0	Lung	120	57.0	Lung	39	37.9
Colorectal	1,423	22.2	Colorectal	63	31.4	Colorectal	13	12.7
Female breast	981	27.2	Female breast	42	29.9	Female breast	12	17.9
Pancreas	737	11.6	Prostate	35	56.6	Pancreas	11	8.9
Prostate	674	29.2	Pancreas	34	16.1	Leukemia	9	7.2
<b>Total Cancer</b>	<b>12,983</b>	<b>205.8</b>	<b>Total Cancer</b>	<b>534</b>	<b>254.7</b>	<b>Total Cancer</b>	<b>161</b>	<b>138.6</b>
						<b>Total Cancer</b>	<b>209</b>	<b>143.2</b>

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 2. ICD-10 codes used. Please refer to the ICD-10 codes listing in the Section Definitions for detailed terminology. 3. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population.



**Table C-11A. Injury Deaths<sup>1</sup> by Leading Causes, Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2002**

	ALL		Poisoning <sup>2</sup>		Motor Vehicle-related <sup>3</sup>		Hanging, strangulation, or suffocation		Falls		Firearm		Other <sup>4</sup>	
	Number	Rate <sup>5</sup>	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>All Persons</b>	<b>2,637</b>	<b>40.0</b>	<b>690</b>	<b>10.6</b>	<b>553</b>	<b>8.6</b>	<b>322</b>	<b>4.8</b>	<b>249</b>	<b>3.6</b>	<b>202</b>	<b>3.2</b>	<b>621</b>	<b>9.2</b>
<1	9	11.3	1	-- <sup>6</sup>	0	0.0	2	-- <sup>6</sup>	3	-- <sup>6</sup>	0	0.0	3	-- <sup>6</sup>
1-14	43	3.6	0	0.0	6	0.5	5	0.4	3	-- <sup>6</sup>	3	-- <sup>6</sup>	26	2.2
15-24	335	40.9	62	7.6	134	16.3	31	3.8	6	0.7	56	6.8	46	5.6
25-44	871	43.8	389	19.5	179	9.0	88	4.4	26	1.3	70	3.5	119	6.0
45-64	577	40.6	211	14.9	113	8.0	61	4.3	43	3.0	50	3.5	99	7.0
65-74	166	38.8	10	2.3	42	9.8	22	5.1	30	7.0	10	2.3	52	12.2
75-84	322	102.0	14	4.4	60	19.0	59	18.7	68	21.5	10	3.2	111	35.2
85+	314	269.1	3	-- <sup>6</sup>	19	16.3	54	46.3	70	60.0	3	-- <sup>6</sup>	165	141.4
<b>All Females</b>	<b>857</b>	<b>22.5</b>	<b>233</b>	<b>6.9</b>	<b>176</b>	<b>5.1</b>	<b>90</b>	<b>2.2</b>	<b>92</b>	<b>2.1</b>	<b>12</b>	<b>0.4</b>	<b>254</b>	<b>5.9</b>
<1	2	-- <sup>6</sup>	0	0.0	0	0.0	1	-- <sup>6</sup>	1	-- <sup>6</sup>	0	0.0	0	0.0
1-14	15	2.6	0	0.0	2	-- <sup>6</sup>	3	-- <sup>6</sup>	1	-- <sup>6</sup>	1	-- <sup>6</sup>	8	1.4
15-24	70	17.0	19	4.6	37	9.0	3	-- <sup>6</sup>	1	-- <sup>6</sup>	0	0.0	10	2.4
25-44	223	22.0	119	11.8	55	5.4	15	1.5	6	0.6	6	0.6	22	2.2
45-64	149	20.3	80	10.9	28	3.8	10	1.4	7	1.0	4	-- <sup>6</sup>	20	2.7
65-74	52	21.9	4	-- <sup>6</sup>	15	6.3	6	2.5	9	3.8	0	0.0	18	7.6
75-84	154	78.8	9	4.6	30	15.4	23	11.8	29	14.8	1	-- <sup>6</sup>	62	31.7
85+	192	223.9	2	-- <sup>6</sup>	9	10.5	29	33.8	38	44.3	0	0.0	114	133.0
<b>All Males</b>	<b>1,780</b>	<b>60.1</b>	<b>457</b>	<b>14.4</b>	<b>377</b>	<b>12.5</b>	<b>232</b>	<b>8.1</b>	<b>157</b>	<b>5.9</b>	<b>190</b>	<b>6.2</b>	<b>367</b>	<b>13.0</b>
<1	7	17.3	1	-- <sup>6</sup>	0	0.0	1	-- <sup>6</sup>	2	-- <sup>6</sup>	0	0.0	3	-- <sup>6</sup>
1-14	28	4.6	0	0.0	4	-- <sup>6</sup>	2	-- <sup>6</sup>	2	-- <sup>6</sup>	2	-- <sup>6</sup>	18	3.0
15-24	265	64.8	43	10.5	97	23.7	28	6.8	5	1.2	56	13.7	36	8.8
25-44	648	66.3	270	27.6	124	12.7	73	7.5	20	2.0	64	6.5	97	9.9
45-64	428	62.5	131	19.1	85	12.4	51	7.4	36	5.3	46	6.7	79	11.5
65-74	114	59.9	6	3.2	27	14.2	16	8.4	21	11.0	10	5.3	34	17.9
75-84	168	139.7	5	4.2	30	24.9	36	29.9	39	32.4	9	7.5	49	40.7
85+	122	394.2	1	-- <sup>6</sup>	10	32.3	25	80.8	32	103.4	3	-- <sup>6</sup>	51	164.8

1. Data presented in this table are classified according to ICD-10. Please refer to Section Definitions for list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, bicyclists and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. Calculations based on fewer than five events are excluded.

**Table C-11A. (continued) Injury Deaths<sup>1</sup> by Leading Causes, Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2002**

	ALL		Poisoning <sup>2</sup>		Motor Vehicle-related <sup>3</sup>		Hanging, strangulation, or suffocation		Falls		Firearm		Other <sup>4</sup>	
	Number	Rate <sup>5</sup>	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>White non-Hispanic</b>	<b>2,227</b>	<b>38.6</b>	<b>602</b>	<b>10.9</b>	<b>478</b>	<b>8.7</b>	<b>288</b>	<b>4.9</b>	<b>226</b>	<b>3.6</b>	<b>114</b>	<b>2.0</b>	<b>519</b>	<b>8.4</b>
Females	764	22.5	211	7.4	153	5.1	81	2.2	85	2.0	8	0.3	226	5.5
Males	1,463	57.3	391	14.6	325	12.8	207	8.2	141	5.8	106	4.1	293	11.8
<b>Black non-Hispanic</b>	<b>193</b>	<b>59.8</b>	<b>38</b>	<b>11.3</b>	<b>29</b>	<b>9.0</b>	<b>14</b>	<b>5.3</b>	<b>6</b>	<b>1.8</b>	<b>60</b>	<b>16.0</b>	<b>46</b>	<b>16.4</b>
Females	47	29.4	15	8.6	7	4.3	6	4.3	1	-- <sup>6</sup>	4	-- <sup>6</sup>	14	9.6
Males	146	94.1	23	14.3	22	14.4	8	6.7	5	3.2	56	30.7	32	24.8
<b>Asian non-Hispanic</b>	<b>49</b>	<b>29.1</b>	<b>4</b>	<b>--<sup>6</sup></b>	<b>14</b>	<b>7.7</b>	<b>10</b>	<b>6.9</b>	<b>6</b>	<b>5.8</b>	<b>9</b>	<b>3.3</b>	<b>6</b>	<b>3.6</b>
Females	13	16.5	0	0.0	7	5.7	2	4.5	2	-- <sup>6</sup>	0	0.0	2	-- <sup>6</sup>
Males	36	44.6	4	-- <sup>6</sup>	7	10.4	8	9.5	4	-- <sup>6</sup>	9	6.8	4	-- <sup>6</sup>
<b>Hispanic</b>	<b>164</b>	<b>48.7</b>	<b>46</b>	<b>11.6</b>	<b>32</b>	<b>8.1</b>	<b>10</b>	<b>6.1</b>	<b>10</b>	<b>5.4</b>	<b>18</b>	<b>3.9</b>	<b>48</b>	<b>13.8</b>
Females	31	20.8	7	3.0	9	5.4	1	-- <sup>6</sup>	4	-- <sup>6</sup>	0	0.0	10	7.6
Males	133	82.1	39	20.9	23	10.6	9	14.6	6	7.0	18	8.0	38	21.0

1. Data presented in this table are classified according to ICD-10. Please refer to Section Definitions for list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, motorists, bicyclists and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. Calculations based on fewer than five events are excluded.

**Table C-11B. Intentional Injury Deaths<sup>1</sup> by  
Gender, Age, Race and Hispanic Ethnicity: Numbers,  
Age-Adjusted, and Age-Specific Rates, Massachusetts: 2002**

	<u>All Intentional</u>		<u>Suicide</u>		<u>Homicide</u>	
	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>
<b>All Persons</b>	<b>610</b>	<b>9.5</b>	<b>425</b>	<b>6.5</b>	<b>185</b>	<b>2.9</b>
<1	2	-- <sup>6</sup>	0	0.0	2	-- <sup>6</sup>
1-14	11	0.9	0	0.0	11	0.9
15-24	116	14.1	53	6.5	63	7.7
25-44	247	12.4	173	8.7	74	3.7
45-64	162	11.4	136	9.6	26	1.8
65-74	33	7.7	28	6.5	5	1.2
75-84	29	9.2	26	8.2	3	-- <sup>6</sup>
85+	10	8.6	9	7.7	1	-- <sup>6</sup>
<b>All Females</b>	<b>108</b>	<b>3.2</b>	<b>74</b>	<b>2.2</b>	<b>34</b>	<b>1.0</b>
<1						
1-14	4	-- <sup>6</sup>	0	0.0	4	-- <sup>6</sup>
15-24	13	3.2	9	2.2	4	-- <sup>6</sup>
25-44	42	4.2	28	2.8	14	1.4
45-64	37	5.0	27	3.7	10	1.4
65-74	6	2.5	5	2.1	1	-- <sup>6</sup>
75-84	4	-- <sup>6</sup>	4	-- <sup>6</sup>	0	0.0
85+	2	-- <sup>6</sup>	1	-- <sup>6</sup>	1	-- <sup>6</sup>
<b>All Males</b>	<b>502</b>	<b>16.4</b>	<b>351</b>	<b>11.5</b>	<b>151</b>	<b>4.9</b>
<1	2	-- <sup>6</sup>	0	0.0	2	-- <sup>6</sup>
1-14	7	1.2	0	0.0	7	1.2
15-24	103	25.2	44	10.8	59	14.4
25-44	205	21.0	145	14.8	60	6.1
45-64	125	18.3	109	15.9	16	2.3
65-74	27	14.2	23	12.1	4	-- <sup>6</sup>
75-84	25	20.8	22	18.3	3	-- <sup>6</sup>
85+	8	25.8	8	25.8	0	0.0

1. Data presented in this table are classified according to ICD-10. Please refer to the Section Definitions for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on fewer than five events are excluded.

**Table C-11B (continued). Intentional Injury Deaths<sup>1</sup> by Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2002**

	<u>All Intentional</u>		<u>Suicide</u>		<u>Homicide</u>	
	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>
<b>White non- Hispanic</b>	<b>452</b>	<b>8.2</b>	<b>382</b>	<b>6.9</b>	<b>70</b>	<b>1.3</b>
Females	86	3.0	66	2.3	20	0.7
Males	366	14.0	316	12.0	50	2.0
<b>Black non- Hispanic</b>	<b>86</b>	<b>23.3</b>	<b>16</b>	<b>4.5</b>	<b>70</b>	<b>18.7</b>
Females	13	6.9	6	3.3	7	3.6
Males	73	40.6	10	6.0	63	34.6
<b>Asian non- Hispanic</b>	<b>21</b>	<b>10.4</b>	<b>15</b>	<b>8.2</b>	<b>6</b>	<b>2.2</b>
Females	1	-- <sup>6</sup>	0	0.0	1	-- <sup>6</sup>
Males	20	21.6	15	18.5	5	3.0
<b>Hispanic</b>	<b>48</b>	<b>12.5</b>	<b>11</b>	<b>4.1</b>	<b>37</b>	<b>8.3</b>
Females	6	2.7	1	-- <sup>6</sup>	5	2.2
Males	42	24.2	10	8.9	32	15.3

1. Data presented in this table are classified according to ICD-10. Please refer to Section Definitions for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on fewer than five events are excluded.
2. Totals do include other and unknown races.

Table C-11C. Injury<sup>1</sup> Deaths by Intent, Method and Gender: Number and Age-Adjusted Rates<sup>2</sup>, Massachusetts: 2002

Type of Injury	<u>All</u>		<u>Female</u>		<u>Male</u>	
	Number	Rate	Number	Rate	Number	Rate
<b>Suicide</b>	425	6.5	74	2.2	351	11.5
Hanging, strangulation or suffocation						
Firearm	160	2.5	22	0.6	138	4.5
Poisoning	98	1.5	5	0.1	93	3.1
Other and unspecified	88	1.4	34	1.0	54	1.7
Other and unspecified	79	1.2	13	0.4	66	2.2
<b>Homicide*</b>	185	2.9	34	1.0	151	4.9
Firearm	93	1.5	5	0.2	88	2.8
Cut or pierce	46	0.7	15	0.5	31	1.0
Other and unspecified	46	0.7	14	0.4	32	1.0
<b>Unintentional Injuries (Accidents)</b>	1,411	21.0	544	13.2	867	30.8
Falls	222	3.2	87	2.0	135	5.1
Hanging, strangulation or suffocation	150	2.2	62	1.4	88	3.4
Smoke, fire and flames	51	0.8	16	0.5	35	1.2
Poisoning	57	0.9	21	0.6	36	1.2
Drowning or submersion	47	0.7	6	0.2	41	1.3
Firearm	6	0.1	0	0.0	6	0.2
Motor Vehicle-related	553	8.6	176	5.1	377	12.5
Injury to pedestrian	71	1.1	19	0.5	52	1.8
Injury to pedal cyclist	2	-- <sup>3</sup>	0	0.0	2	-- <sup>3</sup>
Injury to motorcyclist	55	0.9	5	0.1	50	1.6
Injury to occupant	89	1.4	35	1.0	54	1.8
Other and unspecified	336	5.2	117	3.4	219	7.3
Other and unspecified	325	4.6	176	3.7	149	5.9
<b>Injury Deaths of Undetermined Intent</b>	579	8.9	188	5.6	391	12.2
Poisoning	545	8.4	178	5.3	367	11.5
Fall	9	0.1	2	-- <sup>3</sup>	7	0.2
Drowning or submersion	5	0.1	2	-- <sup>3</sup>	3	-- <sup>3</sup>
Other and unspecified	20	0.3	6	0.2	14	0.4
<b>Legal intervention</b>	4	-- <sup>3</sup>	1	-- <sup>3</sup>	3	-- <sup>3</sup>
Firearm	4	-- <sup>3</sup>	1	-- <sup>3</sup>	3	-- <sup>3</sup>
<b>Adverse Effects</b>	33	0.5	16	0.4	17	0.6
Drugs	3	-- <sup>3</sup>	1	-- <sup>3</sup>	2	-- <sup>3</sup>
Medical Care	30	0.4	15	0.3	15	0.5
<b>ALL INJURIES</b>	2,637	40.0	857	22.5	1,780	60.1

1. Data presented in this table are classified according to ICD-10. Please refer to the Section Definitions for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons; rates are adjusted to the 2000 US standard population. 3. Calculations based on fewer than five events are excluded. \* Does not include terrorist-related deaths.

**Table C-11D. Type of Injury<sup>1</sup> Deaths by Method/Intent Categories: Number and Age-Adjusted Rates<sup>2</sup>,  
Massachusetts: 2002**

Manner	Intent									
	ALL		Unintentional		Intentional		Undetermined		Other <sup>3</sup>	
	Total		Accidents		Suicide	Homicide			Legal	Intervention
	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate
Poisoning	690	10.6	57	0.9	88	1.4	0	0.0	545	8.4
Transport Injuries	572	8.9	573	8.9	2	-- <sup>4</sup>	0	0.0	0	0.0
Motor vehicle-related	553	8.6	553	8.6	0	0.0	0	0.0	0	0.0
Injury to pedestrian	71	1.1	71	1.1	0	0.0	0	0.0	0	0.0
Injury to pedal cyclist	2	-- <sup>4</sup>	2	-- <sup>4</sup>	0	0.0	0	0.0	0	0.0
Injury to motorcyclist	55	0.9	55	0.9	0	0.0	0	0.0	0	0.0
Injury to occupant	89	1.4	89	1.4	0	0.0	0	0.0	0	0.0
Other and unspecified	336	5.2	336	5.2	0	0.0	0	0.0	0	0.0
Other transport	20	4.6	20	0.3	0	0.0	0	0.0	0	0.0
Hanging, strangulation or suffocation	322	4.8	150	2.2	160	2.5	8	0.1	4	-- <sup>4</sup>
Falls	249	3.6	222	3.2	18	0.3	0	0.0	9	0.1
Firearm	202	3.2	6	0.1	98	1.5	93	1.5	1	-- <sup>4</sup>
Drowning and submersion	63	1.0	47	0.7	11	0.2	0	0.0	5	0.1
Smoke, fire and flames	58	0.9	51	0.8	4	-- <sup>4</sup>	2	-- <sup>4</sup>	1	-- <sup>4</sup>
Cut or pierce	67	1.0	1	-- <sup>4</sup>	20	0.3	46	0.7	0	0.0
Other and unspecified	381	5.5	304	4.3	24	0.4	36	0.6	14	0.2
Adverse Effects	33	0.5	NA	NA	NA	NA	NA	NA	NA	NA
<b>ALL INJURIES</b>	<b>2,637</b>	<b>40.0</b>	<b>1,411</b>	<b>21.0</b>	<b>425</b>	<b>6.5</b>	<b>185</b>	<b>2.9</b>	<b>579</b>	<b>8.9</b>
									<b>4</b>	<b>--<sup>4</sup></b>

1. Data presented in this table are classified according to ICD-10. Please refer to the Section Definitions for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000; rates are adjusted to the 2000 US standard population. 3. Includes legal intervention and operations of war. 4. Calculations based on fewer than five events are excluded.

Table C-12A. HIV/AIDS<sup>1</sup> Deaths by Place of Occurrence, Massachusetts: 1989-2002

Year	Total		Place of Occurrence									
			At Home		Hospital		Out of State		Hospice/Nursing Home/Other			
	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>
1990	#	447	90	NA <sup>3</sup>	284	NA <sup>3</sup>	9	NA <sup>3</sup>	64	NA <sup>3</sup>		
	%	100.0	20.1		63.5		2.1		14.3			
1991	#	632	159	NA <sup>3</sup>	338	NA <sup>3</sup>	4	NA <sup>3</sup>	131	NA <sup>3</sup>		
	%	100.0	25.2		53.5		5		20.7			
1992	#	701	171	NA <sup>3</sup>	394	NA <sup>3</sup>	14	NA <sup>3</sup>	122	NA <sup>3</sup>		
	%	100.0	24.4		56.2		2.0		17.4			
1993	#	777	218	NA <sup>3</sup>	413	NA <sup>3</sup>	14	NA <sup>3</sup>	127	NA <sup>3</sup>		
	%	100.0	28.1		53.2		1.8		16.3			
1994	#	938	265	282	514	547	13	14	142	151		
	%	100.0	28.3	28.3	54.8	54.8	1.4	1.4	15.1	15.1		
1995	#	937	303	322	500	532	7	7	127	135		
	%	100.0	32.3	32.3	53.4	53.4	0.7	0.7	13.6	13.5		
1996	#	609	154	164	336	357	9	10	110	117		
	%	100.0	25.3	25.3	55.2	55.1	1.5	1.5	18.1	18.1		
1997	#	242	59	68	158	181	4	5	21	24		
	%	100.0	24.4	24.5	65.3	65.3	5	1.8	8.6	8.7		
1998	#	213	46	53	130	149	2	2	35	40		
	%	100.0	21.6	21.7	61.0	61.1	5	5	16.4	16.4		
1999	#	242 <sup>4</sup>	55 <sup>4</sup>		142 <sup>4</sup>		2 <sup>4</sup>		43 <sup>4</sup>			
	%	100.0	22.7		58.7		5		17.8			
2000	#	226 <sup>4</sup>	48 <sup>4</sup>		145 <sup>4</sup>		0 <sup>4</sup>		33 <sup>4</sup>			
	%	100.0	21.2		64.2		0.0		14.6			
2001	#	249 <sup>4</sup>	47 <sup>4</sup>		164 <sup>4</sup>		4 <sup>4</sup>		34 <sup>4</sup>			
	%	100.0	18.9		65.9		5		13.7			
2002	#	229 <sup>4</sup>	33 <sup>4</sup>		156 <sup>4</sup>		4 <sup>4</sup>		36 <sup>4</sup>			
	%	100.0	14.4		68.1		5		15.7			

\*\*PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2002 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data over time between 1994 through 2002, please use the comparability modified number for years 1994-1998. 5. Calculations based on fewer than 5 events are excluded.

Table C-12B. HIV/AIDS' Deaths by Age, Massachusetts: 1989-2002

Year	Age (in years)											
	<15			15-24			25-34			35-44		
	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>
1990	#	3	NA <sup>3</sup>	4	NA <sup>3</sup>	NA <sup>3</sup>	147	NA <sup>3</sup>	197	NA <sup>3</sup>	96	NA <sup>3</sup>
	%	.5		.5			32.8		44.1		21.5	
1991	#	9	NA <sup>3</sup>	19	NA <sup>3</sup>	NA <sup>3</sup>	214	NA <sup>3</sup>	298	NA <sup>3</sup>	92	NA <sup>3</sup>
	%	1.4		3.0			33.8		47.2		14.6	
1992	#	6	NA <sup>3</sup>	5	NA <sup>3</sup>	NA <sup>3</sup>	243	NA <sup>3</sup>	304	NA <sup>3</sup>	143	NA <sup>3</sup>
	%	0.8		0.7			34.7		43.4		20.4	
1993	#	10	NA <sup>3</sup>	5	NA <sup>3</sup>	NA <sup>3</sup>	234	NA <sup>3</sup>	359	NA <sup>3</sup>	169	NA <sup>3</sup>
	%	1.3		0.6			30.1		46.2		21.8	
1994	#	7	7	8	9	9	272	289	464	494	187	199
	%	0.7	0.7	0.9	0.9	0.9	29.0	29.0	49.5	49.5	19.9	19.9
1995	#	11	12	5	5	5	272	289	443	471	206	219
	%	1.2	1.2	0.5	0.5	0.5	29.0	29.0	47.3	47.2	22.0	22.0
1996	#	4	4	8	9	9	154	164	300	319	143	152
	%	0.7	0.6	1.3	1.4	1.4	25.3	25.3	49.3	49.2	23.5	23.5
1997	#	5	6	1	1	1	35	40	135	155	66	76
	%	2.1	2.2	.5	.5	.5	14.5	14.4	55.8	56.0	27.3	27.4
1998	#	0	0	0	0	0	47	54	106	121	60	69
	%	0.0	0.0	0.0	0.0	0.0	22.1	22.1	49.8	50.0	28.2	28.3
1999	#	2 <sup>4</sup>		9 <sup>4</sup>	34 <sup>4</sup>	112 <sup>4</sup>					85 <sup>4</sup>	
	%	.5		3.7	14.0	46.3					35.1	
2000	#	4 <sup>4</sup>		0 <sup>4</sup>	26 <sup>4</sup>	104 <sup>4</sup>					92 <sup>4</sup>	
	%	.5		0.0 <sup>4</sup>	11.5 <sup>4</sup>	46.0 <sup>4</sup>					40.7 <sup>4</sup>	
2001	#	1 <sup>4</sup>		2 <sup>4</sup>	25 <sup>4</sup>	111 <sup>4</sup>					110 <sup>4</sup>	
	%	.5		.5	10.0	44.6					44.2 <sup>4</sup>	
2002	#	1 <sup>4</sup>		1 <sup>4</sup>	10 <sup>4</sup>	91 <sup>4</sup>					126 <sup>4</sup>	
	%	.5		.5	4.4	39.7					55.0 <sup>4</sup>	

PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome. HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2001 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data over time between 1994 through 2002, please use the comparability modified number for years 1994-1998. Please see Appendix for a detailed explanation. 5. Calculations based on fewer than 5 events are excluded



Table C-12C. HIV/AIDS<sup>1</sup> Deaths by Gender and Race and Hispanic Ethnicity, Massachusetts: 1989-2002

Year	Gender			Race and Ethnicity											
	Male		Female	White non-Hispanic <sup>2</sup>				Black non-Hispanic <sup>2</sup>				Hispanic <sup>2</sup>			
	Comparability Unmodified	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>
1990	#	390	NA	57	NA	301	NA	94	NA	1	NA	50	NA		
	%	87.2		12.8		67.5		21.1		3		11.2			
1991	#	535	NA	97	NA	439	NA	118	NA	0	NA	74	NA		
	%	84.6		15.4		69.5		18.7		0.0		11.7			
1992	#	605	NA	96	NA	463	NA	141	NA	2	NA	95	NA		
	%	86.3		13.7		66.0		20.1		3		13.6			
1993	#	663	NA	114	NA	518	NA	160	NA	5	NA	94	NA		
	%	85.3		14.7		66.7		20.6		0.6		12.1			
1994	#	763	812	175	186	581	618	193	205	7	7	157	167		
	%	81.3	81.4	18.7	18.6	61.9	61.9	20.6	20.5	0.7	0.7	16.7	16.7		
1995	#	753	801	184	196	554	589	223	237	5	5	155	165		
	%	80.4	80.3	19.6	19.7	59.1	59.1	23.8	23.8	0.5	0.5	16.5	16.5		
1996	#	494	525	115	122	341	363	161	171	5	5	101	107		
	%	81.1	81.0	18.9	18.8	56.0	56.0	26.4	26.4	0.8	0.8	16.6	16.5		
1997	#	190	218	52	60	121	139	74	85	0	0	47	54		
	%	78.5	78.7	21.5	21.7	50.0	50.2	30.6	30.7	0.0	0.0	19.4	19.5		
1998	#	169	193	44	50	104	119	51	58	0	0	58	66		
	%	79.3	79.1	20.7	20.5	48.8	48.8	23.9	23.8	0.0	0.0	27.2	27.0		
1999	#	177 <sup>6</sup>	65 <sup>6</sup>			126 <sup>6</sup>	51 <sup>6</sup>			2 <sup>6</sup>		63 <sup>6</sup>			
	%	73.1	26.9			52.1	21.1			5		26.0			
2000	#	161 <sup>6</sup>	65 <sup>6</sup>			104 <sup>6</sup>	61 <sup>6</sup>			2 <sup>6</sup>		59 <sup>6</sup>			
	%	71.2	28.8			46.0	27.0			5		26.1			
2001	#	182 <sup>6</sup>	67 <sup>6</sup>			125 <sup>6</sup>	73 <sup>6</sup>			0		51 <sup>6</sup>			
	%	73.1	26.9			50.2	29.3			0.0		20.5			
2002	#	163 <sup>6</sup>	66 <sup>6</sup>			108 <sup>6</sup>	68 <sup>6</sup>			1		52 <sup>6</sup>			
	%	71.2	28.8			47.1	29.7			5		22.7			

PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1987-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2001 were coded according to the ICD-10 (codes B20-B24). 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. The "Other" category represents Asian non-Hispanics, American Indian non-Hispanics, and Cape Verdean non-Hispanics. 4. Comparability Modified: this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (June 2001). CM data for 1994-1996 use 1998 based CR; CM data for 1997-1998 use revised 1998 based CR. 5. Calculations based on fewer than 5 events are excluded. 6. When comparing data over time between 1994 through 2002, please use the comparability modified number for years 1994-1998.

**Table C-12D. HIV/AIDS<sup>1</sup> Deaths by Gender and Race and Hispanic Ethnicity  
Numbers, Percent and Age-adjusted Rates, Massachusetts: 1999 – 2002**

<u>TOTAL</u>	<u>White non-Hispanic<sup>2</sup></u>			<u>Black non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
Year	#	Percent	Rate <sup>3</sup>	#	Percent	Rate <sup>3</sup>	#	Percent	Rate <sup>3</sup>
1999	126	52%	2.3	51	21%	17.0	63	27%	20.2
2000	104	46%	1.9	61	27%	19.5	59	26%	17.7
2001	125	50%	2.2	73	29%	23.4	51	20%	14.7
2002	108	47%	1.9	68	30%	23.1	52	23%	15.4
<u>MALE</u>									
1999	97	55%	3.6	33	19%	23.5	45	25%	31.3
2000	77	48%	2.8	40	25%	27.7	42	26%	28.1
2001	92	51%	3.4	50	27%	34.8	40	22%	24.5
2002	86	53%	3.1	43	26%	31.7	34	21%	21.4
<u>FEMALE</u>									
1999	29	45%	1.0	18	28%	11.0	18	28%	10.4
2000	27	42%	1.0	21	32%	12.3	17	26%	8.7
2001	33	49%	1.2	23	34%	13.5	11	16%	5.8
2002	22	33%	0.8	25	38%	15.6	18	27%	9.9

1. AIDS and HIV disease deaths coded using ICD-10: B20-B24. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. 3. Number of deaths per 100,000 persons; rates are age-adjusted to the 2000 US standard population.

**Table C-13. HIV/AIDS<sup>1</sup> Deaths by Race, Hispanic Ethnicity, and Gender  
Persons Ages 25-44, Massachusetts: 1991 – 2002**

<b>TOTAL</b>												
<b>White, non-Hispanic<sup>2</sup></b>					<b>Black, non-Hispanic<sup>2</sup></b>					<b>Hispanic</b>		
<b>Year</b>	<b>#</b>	<b>Rate<sup>3</sup></b>	<b>#</b>	<b>Rate</b>	<b>#</b>	<b>Rate</b>	<b>#</b>	<b>Rate</b>	<b>#</b>	<b>Rate</b>	<b>#</b>	<b>Rate</b>
	<b>Comparability Unmodified</b>		<b>Comparability Modified<sup>4</sup></b>		<b>Comparability Unmodified</b>		<b>Comparability Modified<sup>4</sup></b>		<b>Comparability Unmodified</b>		<b>Comparability Modified<sup>4</sup></b>	
1992	362	20.5	NA <sup>5</sup>	NA <sup>5</sup>	105	111.0	NA <sup>5</sup>	NA <sup>5</sup>	79	78.3	NA <sup>5</sup>	NA <sup>5</sup>
1993	391	22.3	NA <sup>5</sup>	NA <sup>5</sup>	122	130.4	NA <sup>5</sup>	NA <sup>5</sup>	76	73.0	NA <sup>5</sup>	NA <sup>5</sup>
1994	451	25.6	480	27.2	152	162.0	162	172.3	127	118.3	135	125.8
1995	428	24.3	455	25.8	159	169.7	169	180.5	124	113.0	132	120.2
1996	251	14.2	267	15.1	113	121.1	120	128.8	85	75.4	90	80.2
1997	86	4.9	98	5.6	48	51.3	55	58.7	36	31.1	41	35.6
1998	68	3.9	78	4.5	38	40.7	44	46.6	47	39.8	54	45.6
1999		74 <sup>6</sup>	4.4			32 <sup>6</sup>	31.2			40 <sup>6</sup>	30.5	
2000		60 <sup>6</sup>	3.7			28 <sup>6</sup>	25.3			40 <sup>6</sup>	27.9	
2001		70 <sup>6</sup>	4.3			35 <sup>6</sup>	31.6			31 <sup>6</sup>	21.7	
2002		42 <sup>6</sup>	2.6			24 <sup>6</sup>	21.7			35 <sup>6</sup>	24.4	
<b>MALE</b>												
1992	328	37.6	NA <sup>5</sup>	NA <sup>5</sup>	79	170.0	NA <sup>5</sup>	NA <sup>5</sup>	64	127.7	NA <sup>5</sup>	NA <sup>5</sup>
1993	350	40.3	NA <sup>5</sup>	NA <sup>5</sup>	91	197.6	NA <sup>5</sup>	NA <sup>5</sup>	57	110.3	NA <sup>5</sup>	NA <sup>5</sup>
1994	388	44.5	413	47.3	113	244.3	120	259.9	93	174.2	99	185.3
1995	367	42.1	390	44.8	112	242.2	119	257.6	90	164.5	96	175.0
1996	221	25.3	235	26.9	73	158.1	78	168.2	61	108.5	65	115.4
1997	71	8.1	81	9.3	30	64.6	34	74.0	28	48.5	32	55.5
1998	57	6.6	65	7.6	27	58.2	31	66.6	34	57.7	39	66.1
1999		54 <sup>6</sup>	6.5			20 <sup>6</sup>	39.9			30 <sup>6</sup>	46.2	
2000		39 <sup>6</sup>	4.8			17 <sup>6</sup>	31.9			27 <sup>6</sup>	28.4	
2001		46 <sup>6</sup>	5.7			19 <sup>6</sup>	35.6			23 <sup>6</sup>	32.7	
2002		29 <sup>6</sup>	3.6			15 <sup>6</sup>	28.1			21 <sup>6</sup>	29.9	
<b>FEMALE</b>												
1992	34	3.8	NA <sup>5</sup>	NA <sup>5</sup>	26	54.0	NA <sup>5</sup>	NA <sup>5</sup>	15	29.5	NA <sup>5</sup>	NA <sup>5</sup>
1993	41	4.6	NA <sup>5</sup>	NA <sup>5</sup>	31	65.2	NA <sup>5</sup>	NA <sup>5</sup>	19	36.3	NA <sup>5</sup>	NA <sup>5</sup>
1994	63	7.1	67	7.6	39	82.0	41	87.2	34	63.0	36	67.0
1995	61	6.9	65	7.3	47	99.0	50	105.3	34	61.8	36	65.7
1996	30	3.4	32	3.6	40	84.9	43	90.3	24	42.4	26	45.1
1997	15	1.7	17	1.9	18	38.2	21	43.7	8	13.8	9	15.8
1998	11	1.3	13	1.5	11	23.4	13	26.8	13	22.0	15	25.2
1999		20 <sup>6</sup>	2.3			12 <sup>6</sup>	22.9			10 <sup>6</sup>	15.1	
2000		21 <sup>6</sup>	2.5			11 <sup>6</sup>	19.2			13 <sup>6</sup>	17.8	
2001		24 <sup>6</sup>	2.9			16 <sup>6</sup>	27.9			8 <sup>6</sup>	11.0	
2002		13 <sup>6</sup>	1.6			9 <sup>6</sup>	15.7			14 <sup>6</sup>	19.2	

1. AIDS and HIV disease deaths for years 1989-1998 coded using ICD-9: 042-044; 1999 –2002 deaths coded using ICD-10: B20-B24. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. 4. Comparability Modified (CM) number and rate based on preliminary comparability ratios (CR) from NCHS (June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 5. NA= not applicable. 6. When comparing data over time from 1994 through 2002, please use comparability modified data for years 1994-1998.

**Table C-14A. Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence: 2002**

Age	Race/Sex	Total <sup>1</sup> Deaths Certified by Medical Examiner	Motor Vehicle Injuries (V01-V99)	Suicide (X60-X84)	Homicide (X85-X99, Undeter. Y00-Y09)	Legal Intervention/ Undeter. Injury (Y10-Y36)	All Other Injuries (STW:00-99, X00-X59)	Non-Violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)
Total	White M	2382	318	319	54	357	240	942	152
	F	1027	145	69	19	170	119	425	80
	Black M	244	24	12	61	26	22	74	25
	F	85	9	4	5	10	6	39	12
	Other M	194	30	21	32	27	20	47	17
	F	57	13	2	8	7	6	18	3
<1	White M	24	0	0	2	1	2	7	12
	F	8	0	0	0	1	1	1	5
	Black M	10	0	0	0	1	2	2	5
	F	6	0	0	0	0	0	2	4
	Other M	4	0	0	0	0	0	0	4
	F	3	0	0	0	0	0	2	1
1-14	White M	20	3	0	4	0	5	4	4
	F	14	1	0	1	1	6	3	2
	Black M	11	1	0	3	0	5	2	0
	F	9	1	0	2	0	2	2	2
	Other M	14	1	0	1	0	5	5	2
	F	2	0	0	1	0	1	0	0
15-19	White M	75	37	11	6	10	4	4	3
	F	30	18	2	1	5	2	0	2
	Black M	19	2	0	11	1	2	2	1
	F	2	0	1	0	0	0	0	1
	Other M	14	4	1	6	0	3	0	0
	F	1	1	0	0	0	0	0	0
20-29	White M	252	71	49	9	65	12	31	15
	F	78	27	11	0	21	4	7	8
	Black M	54	8	4	27	5	5	2	3
	F	6	2	3	1	0	0	0	0
	Other M	42	9	8	14	5	0	2	4
	F	10	3	0	3	1	1	2	0

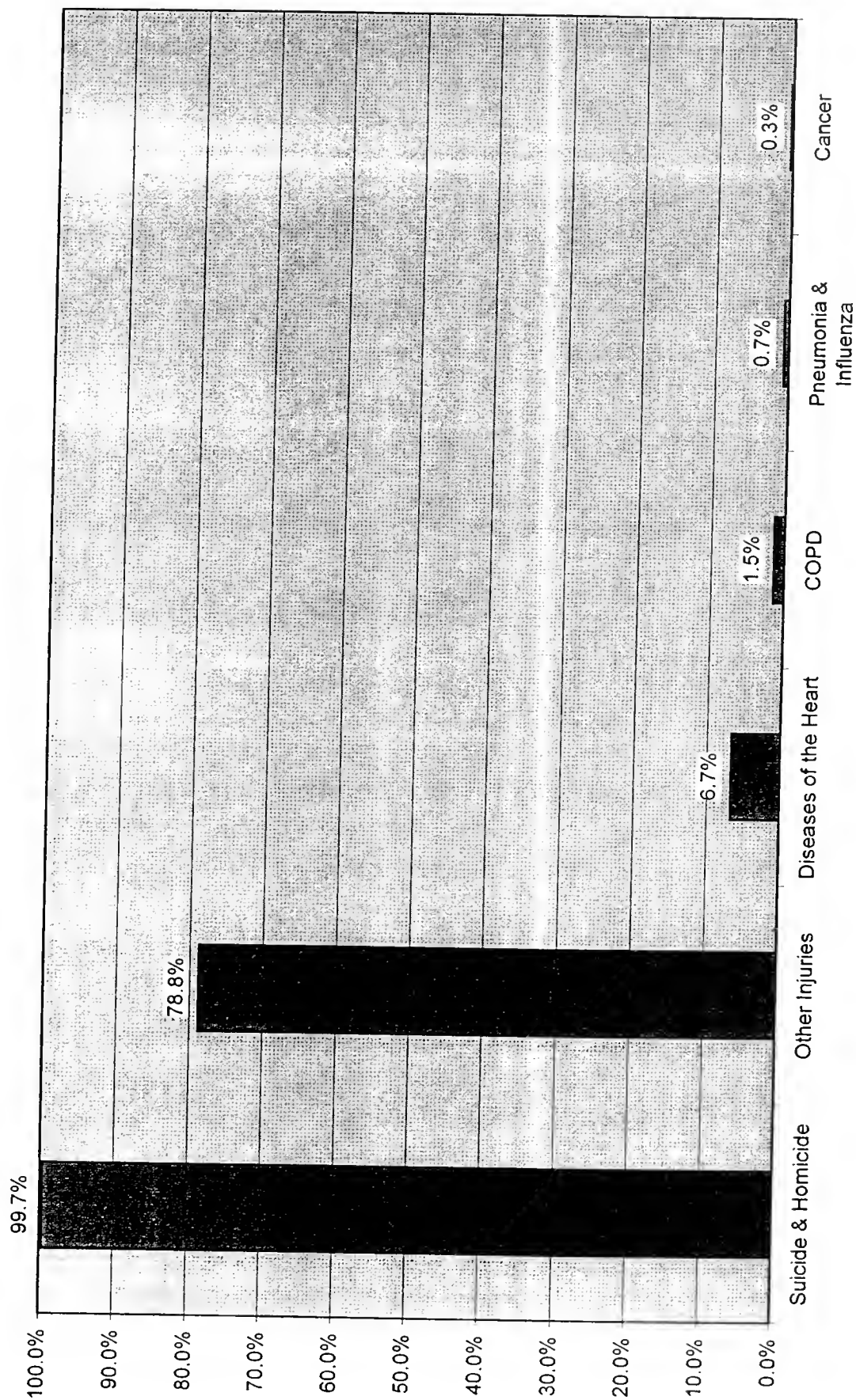
Table C-14A (continued). Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:2002

Table 1. Deaths by Cause, Sex, Race, and Age										
Age	Race/Sex	Total Deaths Certified by Medical Examiner		Motor Vehicle Injuries (V01-V99)	Suicide (X60-X84)	Homicide (X85-X99, Undeter. Y00-Y09)	Legal Intervention/ Undeter. Injury (Y10-Y36)	All Other Injuries (STW:00-99, X00-X59)	Non-Violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)
			Examiner							
30-39	White M	396	51	63	9	113	30	90	40	
	F	146	20	12	6	51	8	29	20	
	Black M	46	4	2	10	9	3	11	7	
	F	13	2	0	1	4	0	5	1	
	Other M	42	4	6	7	13	4	5	3	
	F	10	3	0	0	4	0	2	1	
40-49	White M	614	46	76	15	128	50	247	52	
	F	224	14	20	7	65	11	81	26	
	Black M	48	6	3	7	3	1	20	8	
	F	23	1	0	1	5	1	14	1	
	Other M	36	2	1	3	6	2	18	4	
	F	14	3	1	2	2	1	5	0	
50-59	White M	383	42	55	1	33	30	204	18	
	F	126	9	11	4	21	4	66	11	
	Black M	33	1	3	2	6	1	20	0	
	F	11	3	0	0	1	0	5	2	
	Other M	19	6	1	0	2	2	8	0	
	F	5	1	1	1	0	0	2	0	
60-69	White M	208	17	20	2	7	20	136	6	
	F	79	11	5	0	4	9	48	2	
	Black M	11	0	0	1	1	1	7	1	
	F	5	0	0	0	0	0	5	0	
	Other M	10	3	1	1	1	2	2	0	
	F	3	0	0	1	0	1	1	0	
70-79	White M	245	30	33	6	0	43	132	1	
	F	109	21	4	0	0	20	61	3	
	Black M	6	1	0	0	0	1	4	0	
	F	8	0	0	0	0	2	5	1	
	Other M	10	1	1	0	0	1	7	0	
	F	5	1	0	0	0	2	1	1	

Table C-14A (continued). Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:2002														
Age	Race/Sex	Total Deaths Certified by Medical Examiner		Motor Vehicle Injuries (V01-V99)	Suicide (X60-X84)	Homicide (X85-X99, Y00-Y09)	Legal Intervention/Undeter. Injury (Y10-Y36)	All Other Injuries (STW:00-99, X00-X59)	Non-Violent Causes (A-Q, R00-R94)	Ill Defined & Unknown Causes (R95-R99)				
			Examiner											
80+	White M	165		21	12	0	0	44	87	1				
	F	213		24	4	0	1	54	129	1				
	Black M	6		1	0	0	0	1	4	0				
	F	2		0	0	0	0	1	1	0				
	Other M	3		0	2	0	0	1	0	0				
	F	4		1	0	0	0	0	3	0				

1) 5 deaths are not included in the table due to missing demographic information.

**Figure C-5. Proportion of Deaths Certified by Medical Examiner for Selected Causes of Death, Massachusetts Occurrence Deaths: 2002**



**Table C-14B. Medical Examiner Certified Deaths by County,  
Massachusetts Occurrence: 2002**

County		Population	Occurrence Deaths	M.E. Certified	Referred- Not Certified by M.E.	Natural Cause Deaths Certified By M.E.
Total	#	6,429,761	57,541	3,994	10,513	1,546
	%	100.00%	100.00%	6.94%	18.27%	38.71%
	Rank	-				
Barnstable	#	227,533	2,598	173	356	76
	%	3.54%	4.41%	6.66%	13.70%	43.93%
	Rank	9	9	9	13	6
Berkshire	#	133,305	1,625	96	300	44
	%	2.07%	2.76%	5.91%	18.46%	45.83%
	Rank	11	10	11	5	4
Bristol	#	544,272	4,851	366	840	139
	%	8.46%	8.24%	7.54%	17.32%	37.98%
	Rank	6	7	6	8	11
Dukes	#	15,407	112	21	16	11
	%	0.24%	0.19%	18.75%	14.29%	52.38%
	Rank	13	13	1	12	3
Essex	#	742,110	6,296	351	977	137
	%	11.54%	10.29%	5.57%	15.52%	39.03%
	Rank	3	4	12	11	10
Franklin	#	71,960	486	39	83	22
	%	1.12%	0.83%	8.02%	17.08%	56.41%
	Rank	12	12	4	9	2
Hampden	#	461,833	4,924	341	978	129
	%	7.18%	8.36%	6.93%	19.86%	37.83%
	Rank	8	6	7	2	12
Hampshire	#	152,916	1,046	62	193	25
	%	2.38%	1.78%	5.93%	18.45%	40.32%
	Rank	10	11	10	6	9
Middlesex	#	1,470,868	11,002	641	2,060	278
	%	22.88%	18.69%	5.83%	18.72%	43.37%
	Rank	1	1	12	4	8
Nantucket	#	9,834	51	7	2	6
	%	0.15%	0.09%	13.73%	3.92%	85.71%
	Rank	14	14	2	14	1
Norfolk	#	655,466	5,280	290	866	130
	%	10.19%	8.97%	5.49%	16.40%	44.83%
	Rank	5	5	14	10	5
Plymouth	#	487,150	3,655	289	655	126
	%	7.58%	6.21%	7.91%	17.92%	43.60%
	Rank	7	8	5	7	7
Suffolk	#	685,626	8,537	841	1,797	273
	%	10.66%	14.50%	9.85%	21.05%	32.46%
	Rank	4	2	3	1	13
Worcester	#	771,481	7,078	477	1,390	150
	%	12.00%	12.02%	6.74%	19.64%	31.45%
	Rank	2	3	8	3	14

The percentages and ranks in the Medical Examiner Certified Deaths column and the Referred column are based on totals in the Occurrence Deaths column. The percentages and ranks of natural cause of death are based on total number of medical examiner certified deaths for each county. Total population based on sum of county estimates.



Table C-15A. Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Massachusetts	56,881	819.9	14,694	13,899	3,758	1,054	3,557	2,744	1,418	2,050	553	185	425
Abington	143	962.5	31	36	14	1	8	8	3	3	3	0	4
Acton	102	759.9	24	30	2	3	10	3	4	5	0	0	2
Acushnet	84	775.9	26	18	3	1	8	6	3	1	0	0	2
Adams	119	885.5	28	30	10	0	10	7	2	5	4	0	1
Agawam	322	815.7	94	83	20	4	20	9	2	14	1	0	1
Alford	5	1,429.9	3	1	0	0	0	0	0	0	0	0	0
Amesbury	150	921.1	37	29	12	3	10	9	7	8	0	1	1
Amherst	120	586.1	38	24	4	1	6	8	5	4	4	0	2
Andover	247	771.0	75	54	9	6	14	15	6	4	1	0	1
Arlington	419	746.1	118	113	25	5	29	14	5	15	3	0	4
Ashburnham	28	704.0	5	7	2	1	1	1	2	3	2	0	0
Ashby	14	738.4	4	1	0	0	0	1	0	0	0	0	2
Ashfield	7	418.1	3	1	1	0	2	0	0	0	0	0	0
Ashland	73	708.2	16	22	3	3	6	5	3	2	1	0	0
Athol	144	910.0	34	37	14	3	11	6	5	5	0	0	1
Attleboro	384	877.7	108	90	24	7	23	21	10	15	4	0	7
Auburn	168	739.1	50	35	13	1	13	5	3	5	3	0	1
Avon	48	923.8	18	9	2	0	0	3	0	2	1	0	1
Ayer	53	737.0	15	15	3	2	2	6	1	1	1	0	0
Barnstable	532	780.7	113	148	44	9	30	31	10	12	7	1	7
Barre	37	742.3	8	12	3	0	4	1	0	3	0	0	1
Becket	18	1,093.1	2	8	3	1	2	1	0	0	0	0	1
Bedford	110	568.4	17	28	7	3	4	6	1	8	0	0	1
Belchertown	72	795.3	17	21	5	1	3	6	2	1	1	0	0
Bellingham	102	951.2	20	48	16	3	3	2	0	2	1	0	1
Belmont	222	631.7	46	65	15	9	13	6	2	13	3	0	1
Berkley	30	877.2	3	8	3	2	2	4	2	2	1	0	0
Berlin	23	984.1	7	7	1	2	0	0	4	0	0	0	2
Barnardston	26	933.5	9	6	1	2	0	2	0	0	0	0	0
Beverly	419	804.7	100	111	34	5	44	22	9	11	2	1	3
Billerica	235	909.0	51	60	17	5	12	17	8	6	3	2	5
Blackstone	49	697.5	15	12	2	0	5	2	0	0	0	0	1
Blandford	7	567.6	0	4	1	1	0	0	1	0	0	1	0
Bolton	21	844.4	7	5	0	1	0	0	0	1	1	0	0
Boston	4,416	872.9	981	1,073	298	97	228	156	140	160	37	68	22

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Bourne	204	864.9	46	53	23	3	17	17	6	2	5	1	2
Boxborough	10	725.9	2	2	0	1	2	1	0	1	0	0	0
Boxford	31	537.4	3	18	4	0	0	1	0	2	0	0	1
Boylston	25	766.3	9	5	2	1	3	0	0	1	0	0	1
Braintree	372	781.9	109	87	21	8	25	23	4	14	1	2	1
Brewster	154	726.0	28	39	12	6	18	9	4	8	1	0	1
Bridgewater	157	918.7	42	32	11	3	8	15	4	12	2	0	2
Brimfield	30	985.3	10	7	3	1	1	1	2	0	0	0	0
Brockton	899	978.9	222	210	54	18	48	58	32	33	9	10	7
Brookfield	28	882.0	7	12	7	0	1	2	3	0	0	0	0
Brookline	370	573.0	105	91	16	6	28	12	5	17	2	2	1
Buckland	19	860.6	5	2	0	1	1	4	0	1	0	0	0
Burlington	143	692.5	30	44	14	1	8	7	6	9	2	0	1
Cambridge	584	752.3	145	161	50	16	33	20	9	19	2	2	4
Canton	233	784.9	55	52	11	4	7	17	5	9	2	0	1
Carlisle	14	498.8	0	4	1	1	1	0	1	0	0	0	2
Carver	98	819.9	25	28	4	2	4	6	1	5	2	0	0
Charlemon	10	846.3	3	4	0	1	1	0	0	0	0	0	0
Charlton	84	972.3	16	25	5	1	10	4	4	3	0	0	1
Chatham	116	620.5	37	26	6	2	9	5	3	1	1	0	0
Chelmsford	289	821.0	75	62	15	3	21	19	6	16	6	1	1
Chelsea	304	932.5	69	77	21	4	16	11	9	12	3	1	2
Cheshire	25	667.4	8	5	1	0	1	2	0	1	0	0	0
Chester	7	687.1	3	1	0	0	0	0	0	1	0	0	0
Chesterfield	10	1,125.0	3	2	0	1	0	1	2	0	0	0	0
Chicopee	635	901.2	167	177	44	12	38	23	12	26	5	0	5
Chilmark	4	--	2	0	0	0	0	0	1	0	0	0	0
Clarksburg	14	678.2	5	2	1	1	1	0	0	0	0	0	0
Clinton	158	993.9	39	41	10	4	14	6	4	5	0	0	3
Cohasset	81	968.5	22	21	4	1	3	2	1	2	1	0	0
Colrain	13	756.0	3	5	1	2	0	1	0	0	1	0	1
Concord	190	781.4	36	50	9	2	21	4	0	12	1	0	2
Conway	8	630.5	2	1	0	0	2	0	1	1	0	0	0
Cummington	13	1,562.6	2	5	2	0	0	0	0	1	0	0	0
Dalton	85	958.3	22	20	8	2	3	3	4	7	2	0	0
Danvers	277	806.6	65	63	20	6	19	19	6	15	1	0	2
Dartmouth	287	762.4	96	62	14	7	24	13	6	3	4	1	3

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Dedham	238	783.9	60	49	17	2	11	12	4	7	2	0	1
Deerfield	35	695.1	14	6	2	1	5	2	1	1	0	0	0
Dennis	225	772.1	55	72	14	7	19	11	1	2	3	0	2
Dighton	50	791.4	21	15	2	2	4	1	0	2	2	0	0
Douglas	45	907.6	12	8	3	1	1	0	1	2	2	0	0
Dover	25	553.5	5	8	1	1	2	1	0	3	0	0	0
Dracut	232	1,003.7	68	74	16	5	10	12	4	4	5	0	1
Dudley	67	691.3	20	16	6	1	1	1	0	0	0	0	0
Dunstable	7	443.1	2	4	1	0	1	0	0	0	0	0	0
Duxbury	113	720.5	24	26	5	2	7	5	1	2	2	0	2
East Bridgewater	112	1,039.2	35	24	4	2	9	6	5	10	0	0	0
East Brookfield	19	844.5	5	4	1	0	0	1	0	3	0	0	0
East Longmeadow	188	891.6	41	40	5	6	12	9	0	8	0	0	1
Eastham	76	865.6	18	15	3	1	5	3	2	0	0	0	1
Easthampton	151	837.1	48	39	8	2	11	5	1	9	3	0	1
Easton	147	921.7	35	29	7	2	13	5	4	7	2	1	1
Edgartown	30	896.8	9	10	2	1	1	0	0	1	0	0	1
Egremont	8	441.7	3	0	0	0	0	0	0	1	0	0	1
Erving	10	634.0	3	1	0	0	0	2	1	1	0	0	0
Essex	18	557.9	4	6	3	1	0	1	1	0	0	0	0
Everett	378	889.0	111	91	32	6	21	16	8	12	2	1	2
Fairhaven	229	855.0	81	47	11	5	9	11	6	5	1	0	0
Fall River	1,105	917.4	321	241	64	15	71	47	40	40	7	4	14
Falmouth	387	748.8	99	80	19	6	25	28	10	18	6	0	4
Fitchburg	418	915.6	93	82	12	2	55	23	13	10	1	1	1
Florida	1	-- <sup>4</sup>	0	0	0	0	0	1	0	0	0	0	0
Foxborough	96	675.5	27	31	6	2	3	4	2	1	1	0	0
Frammingham	621	846.1	164	146	34	26	38	22	16	33	6	0	4
Franklin	146	760.7	40	35	11	1	9	6	3	6	6	0	0
Freetown	48	730.5	10	14	6	1	2	1	0	2	2	0	0
Gardner	213	801.0	50	60	17	3	16	8	3	7	2	0	1
Gay Head (Aquinnah)	2	-- <sup>4</sup>	0	1	0	0	0	0	0	0	0	0	0
Georgetown	46	830.4	10	17	4	2	4	2	0	1	2	0	0
Gill	12	828.3	1	3	1	0	2	2	0	0	1	0	0
Gloucester	312	848.7	72	81	22	7	22	18	10	8	2	0	1
Goshen	7	871.0	2	2	0	0	0	1	0	0	0	0	1

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Gosnold	2	-- <sup>4</sup>	1	0	0	0	0	1	0	0	0	0	0
Grafton	100	795.1	24	28	8	5	4	9	2	5	0	0	1
Granby	42	802.4	9	18	8	1	1	2	0	3	2	0	0
Granville	5	495.2	2	1	0	0	0	1	0	0	0	0	0
Great Barrington	93	788.9	31	20	4	0	5	5	0	3	0	0	0
Greenfield	219	808.2	52	48	11	8	21	15	5	11	1	0	0
Groton	55	973.1	13	13	4	1	4	4	1	3	1	0	0
Groveland	40	880.8	7	14	4	0	1	3	1	1	1	0	0
Hadley	62	785.0	20	11	2	2	4	4	2	1	1	0	1
Halifax	68	929.7	20	21	6	2	1	5	1	2	0	0	0
Hamilton	47	745.0	10	18	4	2	6	2	2	2	1	0	0
Hampden	38	693.2	9	14	6	0	1	3	0	3	0	0	0
Hancock	3	-- <sup>4</sup>	0	1	0	0	0	0	0	1	0	0	0
Hanover	76	697.6	25	20	4	3	3	2	1	3	1	0	0
Hanson	68	1099.0	18	22	9	0	1	3	1	3	3	0	1
Hardwick	20	748.2	1	8	3	2	0	0	0	1	2	0	0
Harvard	47	997.9	11	10	3	0	5	0	3	1	0	0	0
Harwich	176	631.9	39	37	7	0	13	10	4	2	1	0	2
Hatfield	28	674.4	5	9	5	0	0	1	2	2	0	0	0
Haverhill	553	865.5	134	134	31	8	26	33	17	16	12	3	3
Hawley	3	-- <sup>4</sup>	0	2	0	0	0	0	0	1	0	0	0
Heath	6	1,486.1	1	4	2	0	0	0	0	0	0	0	1
Hingham	188	799.4	52	45	12	6	17	8	3	4	1	0	1
Hinsdale	19	1,530.1	8	3	1	0	0	1	2	1	2	0	0
Holbrook	132	1,098.2	41	32	8	1	5	9	2	8	0	0	1
Holbrook	130	710.1	35	34	8	1	8	6	4	3	0	0	0
Holden	15	904.4	3	5	1	0	2	0	1	0	0	0	0
Holland	89	977.8	27	21	5	2	5	7	1	3	0	0	0
Holliston	514	1,038.0	147	103	26	9	39	18	19	20	3	3	4
Holyoke	58	803.0	13	16	3	0	7	2	2	2	1	0	1
Hopedale	55	656.5	13	19	3	0	5	2	1	1	1	0	0
Hopkinton	19	866.0	5	7	3	0	1	1	0	1	0	0	1
Hubbardston	108	664.8	26	30	13	1	4	10	3	1	1	0	2
Hudson	81	839.2	17	26	11	0	4	5	1	3	4	0	1

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Huntington	15	885.6	4	5	2	0	2	1	0	0	0	0	1
Ipswich	100	605.2	27	29	5	2	6	5	1	1	0	0	1
Kingston	147	1,063.2	51	26	6	1	11	6	5	4	1	0	0
Lakeville	70	702.2	13	14	5	0	8	2	1	3	1	0	1
Lancaster	46	681.7	13	9	3	3	4	3	0	1	1	0	1
Lanesborough	18	656.5	3	5	2	1	2	1	1	2	0	0	0
Lawrence	538	870.5	144	110	36	7	36	23	22	19	3	3	6
Lee	66	934.8	12	13	4	2	4	1	3	5	0	0	0
Leicester	85	810.1	33	23	8	1	4	3	3	1	1	0	1
Lenox	99	872.7	26	25	5	1	9	6	1	2	2	0	0
Leominster	382	868.2	108	85	22	8	41	19	6	10	2	0	6
Leverett	10	713.2	3	3	2	1	1	1	0	1	0	0	0
Lexington	262	545.0	59	69	17	7	29	12	7	9	1	0	1
Leyden	4	---	0	2	1	0	2	0	0	0	0	0	0
Lincoln	33	525.8	11	10	1	1	2	1	0	0	0	0	0
Littleton	73	884.6	16	21	6	1	10	1	3	6	1	0	1
Longmeadow	168	656.3	37	34	7	1	15	8	1	6	0	0	0
Lowell	863	940.9	240	174	54	14	49	40	19	22	12	4	9
Ludlow	179	782.8	55	35	8	1	10	5	2	7	2	0	0
Lunenburg	67	802.5	12	22	7	2	8	6	3	2	2	0	0
Lynn	838	930.3	220	213	63	16	48	41	12	39	10	6	5
Lynnfield	86	595.2	20	30	8	1	3	4	1	5	1	0	0
Malden	550	896.3	147	137	38	10	26	27	10	16	9	1	5
Manchester	38	568.3	5	9	2	2	4	1	1	1	0	0	1
Mansfield	116	890.5	25	29	4	3	5	7	2	2	2	0	1
Marblehead	171	675.6	51	46	15	3	10	7	2	6	1	0	0
Marion	72	934.1	26	14	5	0	3	6	0	6	0	0	0
Marlborough	335	942.5	88	80	16	12	17	14	11	16	4	1	3
Marshfield	165	895.2	42	46	18	1	11	10	3	5	3	0	1
Mashpee	115	746.2	18	30	10	1	12	6	0	7	5	0	1
Mattapoisett	52	654.6	17	17	1	1	3	3	0	0	0	0	0
Maynard	75	704.3	14	23	4	2	6	4	2	2	1	0	1
Medfield	79	884.5	20	25	8	1	7	0	2	2	0	0	0
Medford	602	790.7	163	152	44	13	24	29	15	26	5	1	3
Medway	90	966.1	26	19	5	1	5	5	1	5	0	0	1
Melrose	281	761.5	84	72	23	7	15	14	7	5	1	0	1
Mendon	23	606.2	7	5	3	0	0	1	1	0	0	0	0

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Merrimack	42	782.2	7	17	2	3	1	3	1	1	0	0	1
Methuen	476	894.5	149	107	33	10	21	22	13	12	6	1	2
Middleborough	172	962.4	43	37	10	2	13	16	4	8	2	0	0
Middlefield	4	-- <sup>4</sup>	1	0	0	0	0	0	2	0	0	0	0
Middleton	58	1,008.8	13	20	5	1	5	0	3	0	0	0	0
Milford	220	740.2	58	51	10	4	8	9	2	10	2	0	2
Milbury	151	906.0	40	31	8	8	11	9	4	5	3	0	0
Millis	42	739.2	7	18	9	2	4	0	2	3	1	0	0
Millville	9	487.6	1	4	2	1	0	1	0	0	0	0	0
Milton	246	676.8	59	74	16	2	20	12	6	11	0	0	0
Monroe	1	-- <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0
Monson	71	993.0	17	13	5	2	8	3	0	3	0	0	0
Montague	84	796.5	19	23	8	1	5	5	2	7	0	0	0
Monterey	4	-- <sup>4</sup>	1	2	2	0	0	0	0	0	0	0	0
Montgomery	10	1,611.5	3	2	0	1	0	2	0	0	0	0	0
Mount Washington	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Nahant	55	908.0	14	11	3	1	6	3	0	2	0	0	0
Nantucket	64	801.6	17	13	5	1	7	3	4	2	0	0	0
Natick	295	794.0	98	67	17	2	23	8	8	7	1	0	1
Needham	308	645.1	77	70	10	7	26	16	4	13	0	0	3
New Ashford	0	0.0	0	0	0	0	0	0	0	0	0	0	0
New Bedford	1,166	972.7	340	247	55	17	67	64	33	36	13	8	7
New Braintree	7	1,127.1	2	2	0	0	1	0	0	0	0	0	0
New Marlborough	11	738.0	3	3	1	0	1	0	1	0	0	0	0
New Salem	2	-- <sup>4</sup>	2	0	0	0	0	0	0	0	0	0	0
Newbury	40	720.4	16	5	3	0	2	1	0	1	3	0	1
Newburyport	188	922.9	49	46	11	7	18	11	4	4	1	0	0
Newton	667	608.0	176	180	35	12	46	29	7	21	1	1	6
Norfolk	38	775.0	6	11	3	4	3	1	2	2	0	0	2
North Adams	237	1,135.5	64	46	19	2	15	18	9	10	3	0	1
North Andover	253	742.8	71	62	10	5	16	8	5	8	2	0	0
North Attleboro	195	897.6	44	41	13	2	14	7	4	5	3	0	2
North Brookfield	35	737.2	10	8	4	1	1	2	2	4	1	0	1

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
North Reading	85	806.6	27	21	12	2	5	6	2	3	0	0	0
Northampton	289	824.0	77	82	32	3	20	8	7	5	1	0	1
Northborough	84	838.6	22	20	7	0	5	3	3	4	2	0	3
Northbridge	183	1,088.6	52	28	8	1	12	6	7	10	0	0	3
Northfield	23	737.5	3	5	2	0	3	0	1	2	0	0	0
Norton	129	1,023.2	32	25	5	4	7	10	4	5	5	0	0
Norwell	97	891.4	15	21	3	1	7	9	3	8	0	0	2
Norwood	324	791.9	67	80	22	7	27	20	7	20	0	0	3
Oak Bluffs	36	943.1	12	6	1	0	4	1	0	0	0	0	0
Oakham	9	882.7	1	1	0	0	0	2	0	0	0	0	0
Orange	75	933.6	18	21	5	1	9	5	0	3	0	0	0
Orleans	104	600.9	25	24	5	1	9	7	6	3	1	0	1
Otis	10	744.1	3	3	1	0	0	1	0	0	1	0	0
Oxford	111	970.9	21	38	11	0	3	5	2	4	3	0	1
Palmer	161	1,063.8	40	39	10	0	12	6	5	5	3	0	0
Paxton	35	758.5	13	7	2	2	1	1	1	0	0	0	1
Peabody	551	878.3	151	145	44	9	36	28	16	20	2	0	4
Pelham	8	850.9	1	1	1	0	0	1	2	0	0	0	0
Pembroke	98	826.0	23	33	8	3	4	3	1	3	1	0	3
Pepperell	60	909.5	22	14	3	2	3	1	3	0	1	0	1
Peru	3	--	2	0	0	0	0	0	0	0	1	0	0
Petersham	8	528.8	4	0	0	0	1	0	0	0	1	0	0
Phillipston	9	804.2	2	2	1	1	1	1	0	0	0	0	0
Pittsfield	560	842.4	169	130	36	10	23	25	20	6	4	1	7
Plainfield	5	881.6	3	1	1	0	0	0	0	0	0	0	0
Plainville	68	958.1	19	22	10	1	2	3	0	1	0	0	1
Plymouth	428	829.1	119	98	22	4	24	25	9	20	3	1	4
Plympton	18	1,014.1	2	9	2	1	1	1	0	0	1	0	0
Princeton	24	1,030.4	9	4	0	0	0	0	0	1	0	0	0
Provincetown	55	1,117.0	10	17	6	2	3	3	3	2	0	0	0
Quincy	940	841.1	222	244	68	17	60	52	24	24	5	4	9
Randolph	293	839.5	77	83	30	7	16	12	6	11	1	0	0
Raynham	101	835.8	26	31	16	0	8	5	1	4	0	0	2
Reading	191	718.6	63	38	6	4	13	10	5	5	0	0	3
Rehoboth	51	655.5	15	11	3	1	5	4	1	0	1	0	1
Revere	485	814.9	119	124	33	4	20	26	14	17	5	1	6
Richmond	10	556.7	2	2	1	1	2	1	0	0	0	0	0
Rochester	26	774.4	7	6	4	0	2	0	1	1	2	0	1

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Rockland	170	959.5	43	44	21	6	9	12	2	3	0	1	1
Rockport	83	588.2	22	20	4	2	3	7	2	5	1	0	0
Rowe	3	-- <sup>4</sup>	0	2	0	0	1	0	0	0	0	0	0
Rowley	39	831.1	14	5	3	0	3	2	1	2	0	0	0
Royalston	4	-- <sup>4</sup>	0	0	0	0	1	0	1	0	0	0	0
Russell	8	709.6	3	2	0	0	0	0	0	1	0	0	0
Rutland	32	732.8	4	12	5	1	0	3	3	0	0	0	0
Salem	374	831.5	105	92	29	5	24	20	8	7	4	2	2
Salisbury	57	784.9	19	14	4	1	1	3	2	1	0	0	0
Sandisfield	19	1,729.0	3	9	3	0	1	4	0	0	0	0	0
Sandwich	144	680.8	28	39	4	4	9	7	4	9	1	1	0
Saugus	267	772.6	74	71	19	7	23	16	3	5	1	0	5
Savoy	4	-- <sup>4</sup>	1	1	1	0	0	1	0	0	0	0	0
Scituate	138	668.2	37	37	8	5	8	8	1	7	3	0	0
Seekonk	112	845.8	33	23	8	1	8	8	4	4	2	0	0
Sharon	107	707.7	25	34	12	4	2	8	2	5	1	0	2
Sheffield	28	753.7	10	9	2	1	2	1	0	0	1	0	0
Shelburne	30	866.4	5	13	2	1	2	1	1	2	0	1	1
Sherborn	14	385.3	1	8	0	2	1	0	0	0	1	0	0
Shirley	33	696.5	6	15	6	0	0	1	1	0	1	0	0
Shrewsbury	251	735.7	68	57	15	2	14	10	3	12	1	1	3
Shutesbury	2	-- <sup>4</sup>	1	0	0	0	0	0	0	0	1	0	0
Somerset	228	789.6	79	43	12	5	15	9	8	5	0	0	1
Somerville	577	876.9	156	143	45	11	36	25	14	27	6	1	6
South Hadley	200	879.0	54	40	15	0	16	16	2	6	1	0	0
Southampton	41	936.7	10	9	2	1	3	0	1	3	0	0	0
Southborough	47	895.0	11	15	2	4	6	2	1	2	1	0	1
Southbridge	192	902.3	53	38	9	3	11	9	8	6	1	2	1
Southwick	78	953.1	20	30	7	1	4	4	1	2	0	0	1
Spencer	110	999.2	28	31	13	1	2	6	7	5	0	1	2
Springfield	1,397	955.3	337	318	97	15	49	71	51	59	22	12	13
Sterling	67	1,271.0	23	16	2	1	4	4	1	1	1	0	0
Stockbridge	17	444.4	5	3	1	0	1	0	1	0	0	0	0
Stoneham	239	720.3	73	62	17	3	15	8	9	7	0	0	0
Stoughton	248	773.6	56	60	24	1	18	15	6	10	2	1	2
Stow	30	715.2	5	13	5	2	0	0	1	1	0	0	3
Sturbridge	71	908.7	23	14	2	0	6	4	2	4	2	0	2
Sudbury	111	823.3	24	29	7	4	7	2	1	8	2	0	1



Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
Sunderland	14	524.3	5	4	2	0	1	1	1	0	1	0	0
Sutton	51	926.0	15	12	4	0	4	4	0	1	1	0	0
Swampscott	155	671.6	34	39	9	4	12	8	0	4	1	0	0
Swansea	141	732.6	28	42	14	3	7	10	4	7	3	1	0
Taunton	521	901.5	152	126	28	9	34	23	9	32	9	0	0
Templeton	82	1,188.5	14	17	7	0	9	7	2	4	1	0	0
Tewksbury	233	940.5	53	64	22	7	8	13	3	8	2	0	0
Tisbury	41	789.0	11	17	4	1	1	2	0	1	1	0	1
Tolland	3	-- <sup>4</sup>	0	2	0	0	0	0	0	0	0	0	0
Topsfield	59	827.5	16	18	3	1	1	5	0	1	0	0	0
Townsend	43	897.8	7	9	6	0	4	3	3	3	2	0	0
Truro	16	567.6	5	3	1	1	0	2	0	0	2	0	0
Tyngsborough	63	1,039.3	13	17	5	1	3	1	0	0	2	1	0
Tyringham	5	1,284.5	0	1	0	0	1	0	2	5	1	0	0
Upton	35	783.0	12	5	3	0	2	1	1	1	0	0	0
Uxbridge	93	1,041.3	27	27	8	1	7	5	2	4	0	0	0
Wakefield	253	814.3	62	67	16	3	23	13	6	8	1	0	1
Wales	11	973.5	4	1	1	0	0	1	0	0	1	0	2
Walpole	203	758.9	34	60	14	4	17	17	7	6	3	0	0
Waltham	481	781.2	103	114	25	8	41	18	7	22	3	0	3
Ware	122	1,052.7	31	33	8	2	9	2	3	5	2	1	2
Wareham	249	1,008.4	71	56	17	6	11	12	6	9	2	0	4
Warren	38	791.8	8	11	4	0	1	0	2	2	0	0	0
Warwick	11	2,385.2	5	0	0	0	2	0	0	0	1	0	0
Washington	2	-- <sup>4</sup>	0	1	0	0	0	0	0	0	0	0	0
Watertown	303	710.9	62	74	14	7	23	9	6	18	3	0	2
Wayland	92	647.0	26	23	6	1	7	4	1	5	0	0	1
Webster	204	915.3	60	40	9	3	9	18	3	3	2	2	1
Wellesley	181	582.7	45	50	8	4	10	5	2	7	0	0	0
Wellfleet	22	490.0	6	6	1	0	2	3	0	0	0	0	0
Wendell	3	-- <sup>4</sup>	0	0	0	0	0	0	0	1	0	0	2
Wenham	33	698.8	11	10	3	1	3	1	0	1	0	0	0
West Boylston	69	789.0	11	19	2	2	4	3	3	6	0	0	0
West Bridgewater	79	786.2	25	18	7	0	4	6	2	1	2	0	2
West Brookfield	39	694.1	13	7	2	0	1	2	1	2	0	0	2
West Newbury	18	628.0	6	3	1	1	0	0	2	1	0	0	0

Table C-15A (continued). Selected Causes of Death by Community, Massachusetts: 2002

COMMUNITY	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
West Springfield	301	901.8	86	72	26	5	17	16	5	5	3	0	1
West Stockbridge	10	551.8	2	4	1	1	0	0	0	1	0	0	0
West Tisbury	12	583.5	5	3	0	0	1	0	0	0	0	0	0
Westborough	147	726.1	38	29	5	1	14	3	6	8	1	0	1
Westfield	367	839.2	105	93	33	10	19	14	8	10	3	3	3
Westford	94	715.5	26	26	2	2	4	3	2	3	0	0	1
Westhampton	5	440.0	2	2	0	1	0	1	0	0	0	0	0
Westminster	55	964.7	20	14	2	1	2	2	0	3	1	0	0
Weston	90	515.8	23	16	6	1	7	0	4	6	1	0	1
Westport	130	828.0	31	38	10	0	6	12	3	5	1	0	0
Westwood	140	588.3	40	37	8	4	8	4	2	6	1	0	1
Weymouth	555	881.7	136	136	41	6	35	37	18	21	7	0	0
Whately	16	989.2	7	2	1	0	1	0	0	1	1	0	0
Whitman	102	903.1	21	33	6	7	6	4	2	5	1	0	0
Wilbraham	139	760.7	45	31	4	7	3	6	1	5	1	0	3
Williamsburg	27	1,036.5	5	5	1	0	0	2	3	2	0	0	0
Williamstown	95	647.4	24	21	4	2	12	2	4	4	1	0	1
Wilmington	151	815.3	37	38	7	5	4	11	7	1	1	0	3
Winchendon	105	1,291.7	29	29	4	0	7	5	4	2	5	0	0
Winchester	217	692.0	55	55	14	1	17	9	3	12	1	1	1
Windsor	3	-- <sup>4</sup>	1	0	0	0	0	0	0	0	0	0	1
Winthrop	202	824.4	46	54	9	4	9	5	2	7	0	0	3
Woburn	350	849.8	90	91	28	9	27	19	14	11	3	0	3
Worcester	1,820	929.3	497	379	110	31	113	88	61	73	15	8	10
Worthington	13	1,146.9	4	2	0	0	0	1	2	0	2	0	0
Wrentham	89	762.8	24	17	3	1	5	3	2	4	4	0	1
Yarmouth	388	716.1	95	89	26	2	38	16	8	6	4	3	0

1. All rates are age adjusted using the 2000 US standard population. 2. Includes only female breast cancer. 3. The title of this cause of death changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Age-adjusted rates based on fewer than five events are excluded.

**Table C-15B. Selected Causes of Death by Community Health Network Area (CHNA), Massachusetts: 2002**

CHNA (Name and Number)

CHNA (Name and Number)	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
<b>Massachusetts</b>	<b>56,881</b>	<b>819.9</b>	<b>14,694</b>	<b>13,899</b>	<b>3,758</b>	<b>1,054</b>	<b>3,557</b>	<b>2,744</b>	<b>1,418</b>	<b>2,050</b>	<b>553</b>	<b>185</b>	<b>425</b>
Community Health Network of Berkshire (1)	1,591	833.2	441	368	111	25	95	81	50	50	21	1	13
Upper Valley Health Web (Franklin County) (2)	811	781.5	204	197	57	23	76	48	19	38	8	1	6
Partnership for Health in Hampshire County (Northampton) (3)	1,219	815.8	332	306	94	15	73	59	36	42	17	0	7
The Community Health Connection (Springfield) (4)	2,896	896.1	734	675	188	47	141	138	67	111	30	13	17
Community Health Network of Southern Worcester County (5)	1,054	858.8	281	257	78	11	49	56	37	36	10	5	11
Community Partners for Health (Milford) (6)	1,104	847.3	298	270	78	13	63	44	19	43	13	0	10
Community Health Network of Greater Metro West (Framingham) (7)	2,791	789.3	710	729	180	77	185	114	78	112	31	1	29
Community Wellness Coalition (Worcester) (8)	2,834	855.3	780	618	176	54	175	134	84	111	23	9	18
Fitchburg/Gardner Community Health Network (9)	2,118	881.4	528	517	128	36	185	107	57	63	28	1	20
Greater Lowell Community Health Network (10)	2,016	896.4	528	481	132	37	108	105	44	64	29	7	17
Greater Lawrence Community Health Network (11)	1,572	837.9	452	353	93	29	92	68	49	43	12	4	9
Greater Haverhill Community Health Network (12)	1,204	840.1	302	302	79	25	66	68	35	38	19	4	7
Community Health Network North (Beverly/Gloucester) (13)	1,109	749.3	267	302	80	23	89	62	26	28	6	1	6
North Shore Community Health Network (14)	2,774	826.8	734	710	210	52	181	146	48	103	21	8	20
Greater Woburn/Concord/Littleton Community Health Network (15)	1,655	695.4	377	442	106	35	135	74	46	74	10	1	17
North Suburban Health Alliance (Medford/Malden/Melrose) (16)	2,579	807.7	730	640	188	48	142	123	62	82	18	3	16
Greater Cambridge/Somerville Community Health Network (17)	2,105	758.3	527	556	149	48	134	74	36	92	17	3	17
West Suburban Health Network (Newton/Waltham) (18)	2,130	652.1	529	524	110	39	151	85	30	85	8	2	13
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop) (19)	5,777	842.5	1,320	1,419	377	115	301	210	170	213	49	72	34
Blue Hills Community Health Alliance (Greater Quincy) (20)	3,655	804.2	893	940	259	68	231	213	81	139	26	6	20
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield) (21)	1,717	891.6	481	414	113	32	108	61	41	64	13	6	13
Greater Brockton Community Health Network (22)	2,067	926.3	526	483	137	35	119	129	60	91	22	12	23
South Shore Community Partners in Prevention (Plymouth) (23)	1,449	862.2	392	373	105	25	76	78	25	50	17	2	12
Greater Attleboro-Taunton Health & Education Response (24)	1,931	871.9	515	450	121	33	131	108	42	82	32	0	14
Partners for a Healthier Community (Fall River) (25)	1,604	865.3	459	364	100	23	99	78	55	57	11	5	16
Greater New Bedford Health & Human Services Coalition (26)	2,213	899.3	674	481	116	38	129	116	55	63	24	11	17
Cape Cod & Islands Community Health Network (27)	2,903	738.0	679	727	193	48	223	165	66	76	38	7	23

1. All rates are age adjusted using the 2000 US standard population. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

**Table C-15C. Selected Causes of Death by County, Massachusetts: 2002**

County	Total Deaths	Age-adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide
<b>Massachusetts</b>	<b>56,881</b>	<b>819.9</b>	<b>14,694</b>	<b>13,899</b>	<b>3,758</b>	<b>1,054</b>	<b>3,557</b>	<b>2,744</b>	<b>1,418</b>	<b>2,050</b>	<b>553</b>	<b>185</b>	<b>425</b>
Barnstable	2,714	737.3	622	678	181	45	209	158	61	72	37	7	21
Berkshire	1,591	833.2	441	368	111	25	95	81	50	50	21	1	13
Bristol	5,254	872.1	1,506	1,180	302	87	332	268	144	182	62	15	42
Dukes	125	768.8	40	36	7	2	7	4	1	2	1	0	2
Essex	6,659	817.6	1,755	1,667	462	129	428	344	158	212	58	17	42
Franklin	646	773.1	164	158	42	19	62	41	13	33	7	1	5
Hampden	4,654	895.6	1,228	1,097	304	80	250	200	111	175	44	19	29
Hampshire	1,234	815.9	336	311	96	15	75	60	36	42	17	0	8
Middlesex	11,749	773.3	3,033	2,977	776	251	745	517	263	447	103	17	95
Nantucket	64	801.6	17	13	5	1	7	3	4	2	0	0	0
Norfolk	5,794	763.6	1,442	1,503	404	102	361	301	122	222	42	9	35
Plymouth	4,086	885.3	1,066	999	277	77	235	244	93	163	49	14	40
Suffolk	5,407	868.3	1,215	1,328	361	109	273	198	165	196	47	70	33
Worcester	6,901	857.6	1,828	1,583	430	112	478	325	197	252	65	15	60

1. All rates are age adjusted using the 2000 US standard population. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table C-16

RESIDENT DEATHS BY CAUSE, SEX, AND RACE,  
MASSACHUSETTS: 2002

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
A04	Other bacterial intestinal infections	61	25	36	60	25	35	1	0	1	0	0	0
A08	Viral and other specified intestinal infections	2	0	2	1	0	1	1	0	1	0	0	0
A09	Diarrhea and gastroenteritis of presumed infectious origin	3	2	1	3	2	1	0	0	0	0	0	0
A16	Respiratory tuberculosis, not confirmed bacteriologically or histologically	6	2	4	5	2	3	1	0	1	0	0	0
A18	Tuberculosis of other organs	2	2	0	2	2	0	0	0	0	0	0	0
A31	Infection due to other mycobacteria	5	2	3	5	2	3	0	0	0	0	0	0
A39	Meningococcal infection	2	1	1	1	1	0	1	0	1	0	0	0
A40	Streptococcal septicemia	6	2	4	6	2	4	0	0	0	0	0	0
A41	Other septicemia	1,009	447	562	946	417	529	53	25	28	10	5	5
A42	Actinomycosis	1	0	1	1	0	1	0	0	0	0	0	0
A43	Nocardiosis	1	0	1	1	0	1	0	0	0	0	0	0
A48	Other bacterial diseases, not elsewhere classified	4	4	0	4	4	0	0	0	0	0	0	0
A49	Bacterial infection of unspecified site	21	9	12	21	9	12	0	0	0	0	0	0
A81	Atypical virus infections of central nervous system	4	1	3	3	1	2	1	0	1	0	0	0
A83	Mosquito-borne viral encephalitis	1	0	1	1	0	1	0	0	0	0	0	0
A86	Unspecified viral encephalitis	4	1	3	4	1	3	0	0	0	0	0	0
A89	Unspecified viral Infection of central nervous system	1	0	1	1	0	1	0	0	0	0	0	0
A92	Other mosquito-borne viral fevers	1	1	0	1	1	0	0	0	0	0	0	0
B00	Herpes-viral [herpes simplex] infections	2	1	1	2	1	1	0	0	0	0	0	0
B02	Zoster [herpes zoster]	3	1	2	3	1	2	0	0	0	0	0	0
B15	Acute hepatitis A	1	1	0	1	1	0	0	0	0	0	0	0
B16	Acute hepatitis B	12	9	3	9	7	2	2	1	1	1	1	0
B17	Other acute viral hepatitis	83	62	21	66	49	17	15	11	4	2	2	0
B18	Chronic viral hepatitis	7	5	2	7	5	2	0	0	0	0	0	0
B19	Unspecified viral hepatitis	1	1	0	1	1	0	0	0	0	0	0	0
B20	Human immunodeficiency virus [HIV] disease resulting in infectious and parasitic disease	101	69	32	71	48	23	29	21	8	1	0	1
B21	Human immunodeficiency virus [HIV] disease resulting in malignant neoplasms	13	10	3	8	8	0	5	2	3	0	0	0
B22	Human immunodeficiency virus [HIV] disease resulting in other specified diseases	21	18	3	15	13	2	6	5	1	0	0	0
B23	Human immunodeficiency virus [HIV] disease resulting in other conditions	58	43	15	37	29	8	21	14	7	0	0	0
B24	Unspecified human immunodeficiency virus [HIV] disease	36	23	13	28	21	7	8	2	6	0	0	0
B25	Cytomegaloviral disease	1	0	1	1	0	1	0	0	0	0	0	0
B27	Infectious mononucleosis	1	1	0	1	1	0	0	0	0	0	0	0
B34	Viral infection of unspecified site	4	1	3	4	1	3	0	0	0	0	0	0
B37	Candidiasis	5	2	3	5	2	3	0	0	0	0	0	0
B38	Coccidioidomycosis	1	0	1	1	0	1	0	0	0	0	0	0
B44	Aspergillosis	4	3	1	4	3	1	0	0	0	0	0	0
B45	Cryptococcosis	3	2	1	2	1	1	0	0	0	0	1	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
B49	Unspecified mycosis	6	4	2	6	4	2	0	0	0	0	0	0
B59	Pneumocystosis	5	2	3	5	2	3	0	0	0	0	0	0
B88	Other Infestations	1	1	0	1	1	0	0	0	0	0	0	0
B90	Sequelae of tuberculosis	3	1	2	3	1	2	0	0	0	0	0	0
B91	Sequelae of poliomyelitis	5	5	0	5	5	0	0	0	0	0	0	0
B94	Sequelae of other and unspecified infectious and parasitic disease	14	11	3	12	9	3	2	2	0	0	0	0
B99	Other and unspecified infectious diseases	4	2	2	4	2	2	0	0	0	0	0	0
C00	Malignant neoplasm of lip	2	2	0	2	2	0	0	0	0	0	0	0
C01	Malignant neoplasm of base of tongue	1	1	0	1	1	0	0	0	0	0	0	0
C02	Malignant neoplasm of other and unspecified parts of tongue	38	23	15	36	21	15	2	2	0	0	0	0
C03	Malignant neoplasm of gum	1	1	0	1	1	0	0	0	0	0	0	0
C04	Malignant neoplasm of floor of mouth	6	6	0	6	6	0	0	0	0	0	0	0
C05	Malignant neoplasm of palate	3	2	1	3	2	1	0	0	0	0	0	0
C06	Malignant neoplasm of other and unspecified parts of mouth	19	14	5	18	13	5	1	1	0	0	0	0
C07	Malignant neoplasm of parotid gland	18	14	4	17	14	3	0	0	0	1	0	1
C08	Malignant neoplasm of other and unspecified major salivary glands	6	1	5	6	1	5	0	0	0	0	0	0
C09	Malignant neoplasm of tonsil	17	10	7	14	9	5	2	1	1	1	0	1
C10	Malignant neoplasm of oropharynx	18	9	9	12	5	7	2	2	0	4	2	2
C11	Malignant neoplasm of nasopharynx	12	9	3	3	3	0	1	0	1	8	6	2
C12	Malignant neoplasm of pyriform sinus	3	1	2	3	1	2	0	0	0	0	0	0
C13	Malignant neoplasm of hypopharynx	6	6	0	6	6	0	0	0	0	0	0	0
C14	Malignant neoplasm of other and ill-defined sites in the lip, oral cavity, and pharynx	42	35	7	41	34	7	1	1	0	0	0	0
C15	Malignant neoplasm of esophagus	363	285	78	347	271	76	15	13	2	1	1	0
C16	Malignant neoplasm of stomach	350	184	166	318	165	153	21	14	7	11	5	6
C17	Malignant neoplasm of small intestine	23	11	12	22	11	11	1	0	1	0	0	0
C18	Malignant neoplasm of colon	1,221	550	671	1,156	514	642	55	28	27	10	8	2
C19	Malignant neoplasm of rectosigmoid junction	68	32	36	64	30	34	4	2	2	0	0	0
C20	Malignant neoplasm of rectum	209	113	96	199	109	90	6	1	5	4	3	1
C21	Malignant neoplasm of anus and anal canal	15	7	8	15	7	8	0	0	0	0	0	0
C22	Malignant neoplasm of liver and intrahepatic bile ducts	320	218	102	292	194	98	14	10	4	14	14	0
C23	Malignant neoplasm of gallbladder	38	13	25	32	11	21	6	2	4	0	0	0
C24	Malignant neoplasm of other and unspecified parts of biliary tract	44	25	19	44	25	19	0	0	0	0	0	0
C25	Malignant neoplasm of pancreas	799	380	419	752	351	401	35	22	13	12	7	5
C26	Malignant neoplasm of other and ill-defined digestive organs	39	19	20	38	18	20	1	1	0	0	0	0
C31	Malignant neoplasm of accessory sinuses	6	6	0	5	5	0	0	0	0	1	1	0
C32	Malignant neoplasm of larynx	106	79	27	103	77	26	3	2	1	0	0	0
C33	Malignant neoplasm of trachea	1	1	0	1	1	0	0	0	0	0	0	0
C34	Malignant neoplasm of bronchus and lung	3,757	1,979	1,778	3,594	1,883	1,711	122	72	50	41	24	17
C37	Malignant neoplasm of thymus	4	4	0	3	3	0	1	1	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals		Whites		Blacks		Other	
		Tot	Fem	Tot	Fem	Tot	Fem	Tot	Fem
C38	Malignant neoplasm of heart, mediastinum, and pleura	6	5	6	5	0	0	0	0
C39	Malignant neoplasm of other and ill-defined sites in the respiratory system and intrathoracic organs	1	1	1	1	0	0	0	0
C41	Malignant neoplasm of bone and articular cartilage of other and unspecified sites	20	13	16	13	3	0	1	0
C43	Malignant melanoma of skin	184	69	182	68	0	0	2	1
C44	Other malignant neoplasms of skin	59	24	59	24	0	0	0	0
C45	Mesothelioma	72	11	71	11	1	0	0	0
C46	Kaposi's sarcoma	2	2	1	1	0	0	1	1
C47	Malignant neoplasm of peripheral nerves and autonomic nervous system	7	2	7	2	0	0	0	0
C48	Malignant neoplasm of retroperitoneum and peritoneum	16	11	14	10	2	1	0	0
C49	Malignant neoplasm of other connective and soft tissue	86	39	83	36	3	3	0	0
C50	Malignant neoplasm of breast	1,061	1,054	1,004	998	43	43	14	13
C51	Malignant neoplasm of vulva	20	20	19	19	1	1	0	0
C52	Malignant neoplasm of vagina	4	4	4	4	0	0	0	0
C53	Malignant neoplasm of cervix uteri	56	56	48	48	5	5	3	3
C54	Malignant neoplasm of corpus uteri	86	86	79	79	6	6	1	1
C55	Malignant neoplasm of uterus, part unspecified	98	98	91	91	4	4	3	3
C56	Malignant neoplasm of ovary	385	385	368	368	11	11	6	6
C57	Malignant neoplasm of other and unspecified female genital organs	9	9	7	7	2	2	0	0
C60	Malignant neoplasm of penis	4	4	4	4	0	0	0	0
C61	Malignant neoplasm of prostate	721	0	684	0	35	0	2	0
C62	Malignant neoplasm of testis	13	0	13	0	0	0	0	0
C63	Malignant neoplasm of other and unspecified male genital organs	1	0	1	0	0	0	0	0
C64	Malignant neoplasm of kidney, except renal pelvis	239	93	235	91	4	2	0	0
C65	Malignant neoplasm of renal pelvis	6	1	6	1	0	0	0	0
C66	Malignant neoplasm of ureter	7	3	7	3	0	0	0	0
C67	Malignant neoplasm of bladder	361	144	347	142	9	7	5	0
C68	Malignant neoplasm of other and unspecified urinary organs	7	2	5	1	1	1	1	0
C69	Malignant neoplasm of eye and adnexa	3	3	3	3	0	0	0	0
C70	Malignant neoplasm of meninges	2	0	2	0	0	0	0	0
C71	Malignant neoplasm of brain	285	122	271	116	9	4	5	3
C72	Malignant neoplasm of spinal cord, cranial nerves, & other parts of central nervous system	1	1	0	0	1	1	0	0
C73	Malignant neoplasm of thyroid gland	26	17	22	14	2	1	2	2
C74	Malignant neoplasm of adrenal gland	11	7	9	6	2	1	0	0
C75	Malignant neoplasm of other endocrine glands and related structures	1	1	1	1	0	0	0	0
C76	Malignant neoplasm of other and ill-defined sites	85	37	83	36	2	1	0	0
C78	Secondary malignant neoplasm of respiratory and digestive organs	88	45	84	44	2	1	2	0
C79	Secondary malignant neoplasm of other sites	74	40	70	39	3	2	1	0
C80	Malignant neoplasm without specification of site	789	389	748	366	35	17	6	5

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
C81	Hodgkin's disease	39	26	13	35	23	12	4	3	1	0	0	0
C82	Follicular [nodular] non-Hodgkin's lymphoma	5	4	1	5	4	1	0	0	0	0	0	0
C83	Diffuse non-Hodgkin's lymphoma	42	21	21	37	18	19	4	3	1	1	0	1
C84	Peripheral and cutaneous T-cell lymphomas	18	10	8	14	8	6	4	2	2	0	0	0
C85	Other and unspecified types of non-Hodgkin's lymphoma	497	240	257	480	230	250	13	7	6	4	3	1
C88	Malignant immunoproliferative diseases	13	4	9	13	4	9	0	0	0	0	0	0
C90	Multiple myeloma and malignant plasma cell neoplasms	281	135	146	266	130	136	15	5	10	0	0	0
C91	Lymphoid leukemia	118	62	56	111	58	53	5	3	2	2	1	1
C92	Myeloid leukemia	189	97	92	175	89	86	10	5	5	4	3	1
C93	Monocytic leukemia	2	0	2	2	0	2	0	0	0	0	0	0
C95	Leukemia of unspecified cell type	137	69	68	133	66	67	4	3	1	0	0	0
C96	Other and unspecified malignant neoplasms of lymphoid, hematopoietic, and related tissue	3	1	2	3	1	2	0	0	0	0	0	0
C97	Malignant neoplasms of independent (primary) multiple sites	104	55	49	101	53	48	3	2	1	0	0	0
D12	Benign neoplasm of colon, rectum, anus, and anal canal	1	1	0	1	1	0	0	0	0	0	0	0
D13	Benign neoplasm of other and ill-defined parts of digestive system	2	1	1	1	1	0	0	0	0	1	0	1
D15	Benign neoplasm of other and unspecified intrathoracic organs	1	0	1	1	0	1	0	0	0	0	0	0
D18	Hemangioma and lymphangioma, any site	1	1	0	1	1	0	0	0	0	0	0	0
D23	Other benign neoplasms of skin	1	0	1	1	0	1	0	0	0	0	0	0
D27	Benign neoplasm of ovary	1	0	1	1	0	1	0	0	0	0	0	0
D32	Benign neoplasm of meninges	1	0	1	1	0	1	0	0	0	0	0	0
D35	Benign neoplasm of other and unspecified endocrine glands	20	5	15	19	4	15	1	1	0	0	0	0
D37	Neoplasm of uncertain or unknown behavior of oral cavity and digestive organs	3	2	1	3	2	1	0	0	0	0	0	0
D38	Neoplasm of uncertain/unknown behavior of middle ear & respiratory & intrathoracic organs	23	14	9	22	14	8	1	0	1	0	0	0
D39	Neoplasm of uncertain or unknown behavior of female genital organs	12	5	7	12	5	7	0	0	0	0	0	0
D41	Neoplasm of uncertain or unknown behavior of urinary organs	5	0	5	5	0	5	0	0	0	0	0	0
D43	Neoplasm of uncertain or unknown behavior of brain and central nervous system	4	2	2	4	2	2	0	0	0	0	0	0
D44	Neoplasm of uncertain or unknown behavior of endocrine glands	96	47	49	91	43	48	4	3	1	1	1	0
D45	Polycythemia vera	2	0	2	2	0	2	0	0	0	0	0	0
D46	Myelodysplastic syndromes	10	7	3	9	6	3	0	0	0	1	1	0
D47	Other neoplasms of uncertain/unknown behavior of lymphoid, hematopoietic, & related tissue	104	55	49	99	52	47	4	2	2	1	1	0
D48	Neoplasm of uncertain or unknown behavior of other and unspecified sites	35	15	20	32	13	19	2	1	1	1	1	0
D50	Iron deficiency anemia	21	5	16	21	5	16	0	0	0	0	0	0
D51	Vitamin B12 deficiency anemia	5	3	2	5	3	2	0	0	0	0	0	0
D53	Other nutritional anemias	3	0	3	3	0	3	0	0	0	0	0	0
D57	Sickle-cell disorders	1	0	1	1	0	1	0	0	0	0	0	0
D58	Other hereditary hemolytic anemias	3	0	3	1	0	1	2	0	2	0	0	0
D59	Acquired hemolytic anemia	4	2	2	4	2	2	0	0	0	0	0	0
D61	Other aplastic anemias	3	1	2	3	1	2	0	0	0	0	0	0
D64	Other anemias	28	11	17	27	11	16	1	0	1	0	0	0
		76	21	55	73	19	54	2	1	1	1	1	0



Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
D65	Disseminated intravascular coagulation [defibrination syndrome]	21	11	10	19	11	8	2	0	2	0	0	0
D66	Hereditary factor VIII deficiency	2	2	0	2	2	0	0	0	0	0	0	0
D68	Other coagulation defects	23	16	7	22	15	7	1	1	0	0	0	0
D69	Purpura and other hemorrhagic conditions	19	8	11	18	7	11	1	1	0	0	0	0
D70	Agranulocytosis	9	5	4	9	5	4	0	0	0	0	0	0
D71	Functional disorders of polymorphonuclear neutrophils	1	0	1	1	0	1	0	0	0	0	0	0
D72	Other disorders of white blood cells	1	0	1	1	0	1	0	0	0	0	0	0
D73	Diseases of spleen	2	2	0	2	2	0	0	0	0	0	0	0
D75	Other diseases of blood and blood-forming organs	6	0	6	6	0	6	0	0	0	0	0	0
D76	Certain diseases involving lymphoreticular tissue and reticulohistiocytic system	5	3	2	2	1	1	2	1	1	1	1	0
D80	Immunodeficiency with predominantly antibody defects	2	1	1	2	1	1	0	0	0	0	0	0
D81	Combined immunodeficiencies	1	0	1	1	0	1	0	0	0	0	0	0
D83	Common variable immunodeficiency	1	1	0	1	1	0	0	0	0	0	0	0
D84	Other immunodeficiencies	10	6	4	7	4	3	3	2	1	0	0	0
D86	Sarcoidosis	22	9	13	16	7	9	5	1	4	1	1	0
E03	Other hypothyroidism	38	9	29	38	9	29	0	0	0	0	0	0
E04	Other nontoxic goiter	1	0	1	1	0	1	0	0	0	0	0	0
E05	Thyrototoxicosis [hyperthyroidism]	6	2	4	5	1	4	1	1	0	0	0	0
E07	Other disorders of thyroid	2	0	2	1	0	1	1	0	1	0	0	0
E10	Insulin-dependent diabetes mellitus	121	57	64	118	56	62	3	1	2	0	0	0
E11	Noninsulin-dependent diabetes mellitus	145	67	78	139	65	74	6	2	4	0	0	0
E14	Unspecified diabetes mellitus	1,152	606	546	1,044	559	485	88	38	50	20	9	11
E16	Other disorders of pancreatic internal secretion	10	5	5	9	5	4	1	0	1	0	0	0
E21	Hyperparathyroidism and other disorders of parathyroid gland	2	0	2	0	0	0	2	0	2	0	0	0
E22	Hyperfunction of pituitary gland	1	1	0	1	1	0	0	0	0	0	0	0
E23	Hypofunction and other disorders of the pituitary gland	4	1	3	4	1	3	0	0	0	0	0	0
E27	Other disorders of adrenal gland	5	0	5	5	0	5	0	0	0	0	0	0
E41	Nutritional marasmus	2	1	1	2	1	1	0	0	0	0	0	0
E43	Unspecified severe protein-energy malnutrition	4	1	3	4	1	3	0	0	0	0	0	0
E45	Retarded development following protein-energy malnutrition	2	0	2	2	0	2	0	0	0	0	0	0
E46	Unspecified protein-energy malnutrition	43	12	31	40	11	29	3	1	2	0	0	0
E51	Thiamin deficiency	1	1	0	1	1	0	0	0	0	0	0	0
E66	Obesity	71	37	34	61	36	25	9	1	8	1	0	1
E71	Disorders of branched-chain amino-acid metabolism and fatty-acid metabolism	2	1	1	2	1	1	0	0	0	0	0	0
E74	Other disorders of carbohydrate metabolism	1	0	1	1	0	1	0	0	0	0	0	0
E75	Disorders of sphingolipid metabolism and other lipid storage disorders	6	4	2	5	3	2	1	1	0	0	0	0
E76	Disorders of glycosaminoglycan metabolism	2	1	1	2	1	1	0	0	0	0	0	0
E78	Disorders of lipoprotein metabolism and other lipidemias	74	44	30	73	44	29	1	0	1	0	0	0
E80	Disorders of porphyrin and bilirubin metabolism	1	1	0	1	1	0	0	0	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
E83	Disorders of mineral metabolism	8	5	3	6	4	2	2	1	1	0	0	0
E84	Cystic fibrosis	18	8	10	18	8	10	0	0	0	0	0	0
E85	Amyloidosis	21	15	6	20	14	6	0	0	0	1	1	0
E86	Volume depletion	161	38	123	154	36	118	7	2	5	0	0	0
E87	Other disorders of fluid, electrolyte, and acid-base balance	79	33	46	72	29	43	4	2	2	3	2	1
E88	Other metabolic disorders	11	7	4	9	6	3	1	1	0	1	0	1
F01	Vascular dementia	2	1	1	1	1	0	1	0	1	0	0	0
F03	Unspecified dementia	1,532	422	1,110	1,480	402	1,078	44	13	31	8	7	1
F05	Delirium, not induced by alcohol and other psychoactive substances	4	1	3	4	1	3	0	0	0	0	0	0
F06	Other mental disorders due to brain damage and dysfunction and to physical disease	142	34	108	136	33	103	5	1	4	1	0	1
F07	Personality and behavioral disorders due to brain disease, damage, and dysfunction	1	1	0	1	1	0	0	0	0	0	0	0
F10	Mental and behavioral disorders due to use of alcohol	187	148	39	175	138	37	10	8	2	2	2	0
F11	Mental and behavioral disorders due to use of opioids	1	1	0	1	1	0	0	0	0	0	0	0
F14	Mental and behavioral disorders due to use of cocaine	1	1	0	1	1	0	0	0	0	0	0	0
F17	Mental and behavioral disorders due to use of tobacco	4	2	2	4	2	2	0	0	0	0	0	0
F19	Mental and behavioral disorders due to multiple-drug use and use of other psychoactive substances	24	18	6	24	18	6	0	0	0	0	0	0
F20	Schizophrenia	12	7	5	11	6	5	1	1	0	0	0	0
F25	Schizoaffective disorders	1	0	1	1	0	1	0	0	0	0	0	0
F29	Unspecified nonorganic psychosis	5	1	4	5	1	4	0	0	0	0	0	0
F31	Bipolar affective disorder	1	1	0	1	1	0	0	0	0	0	0	0
F32	Depressive episode	37	9	28	37	9	28	0	0	0	0	0	0
F41	Other anxiety disorders	1	0	1	1	0	1	0	0	0	0	0	0
F43	Reaction to severe stress, and adjustment disorders	1	1	0	1	1	0	0	0	0	0	0	0
F50	Eating disorders	2	0	2	2	0	2	0	0	0	0	0	0
F54	Psychological and behavioral factors associated with disorders or diseases classified elsewhere	2	1	1	2	1	1	0	0	0	0	0	0
F79	Unspecified mental retardation	6	1	5	6	1	5	0	0	0	0	0	0
F99	Mental disorder, not otherwise specified	1	0	1	1	0	1	0	0	0	0	0	0
G00	Bacterial meningitis, not elsewhere classified	3	1	2	3	1	2	0	0	0	0	0	0
G03	Meningitis due to other and unspecified causes	10	5	5	6	3	3	3	2	1	1	0	1
G04	Encephalitis, myelitis, and encephalomyelitis	13	8	5	12	8	4	0	0	0	1	0	1
G06	Intracranial and intraspinal abscess and granuloma	2	2	0	2	2	0	0	0	0	0	0	0
G08	Intracranial and intraspinal phlebitis and thrombophlebitis	1	0	1	1	0	1	0	0	0	0	0	0
G09	Sequelae of inflammatory diseases of central nervous system	4	3	1	4	3	1	0	0	0	0	0	0
G10	Huntington's disease	26	14	12	26	14	12	0	0	0	0	0	0
G11	Hereditary ataxia	2	2	0	2	2	0	0	0	0	0	0	0
G12	Spinal muscular atrophy and related syndromes	169	84	85	166	83	83	3	1	2	0	0	0
G20	Parkinson's disease	460	258	202	450	250	200	6	4	2	4	4	0

Table C-16, 2002 (continued)

ICD	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
G21	Secondary parkinsonism	3	3	0	3	3	0	0	0	0	0	0	0
G23	Other degenerative diseases of basal ganglia	7	1	6	7	1	6	0	0	0	0	0	0
G24	Dystonia	2	1	1	2	1	1	0	0	0	0	0	0
G25	Other extrapyramidal and movement disorders	2	0	2	2	0	2	0	0	0	0	0	0
G30	Alzheimer's disease	1,587	436	1,151	1,556	427	1,129	24	7	17	7	2	5
G31	Other degenerative diseases of nervous system, not elsewhere classified	55	26	29	51	23	28	3	2	1	1	1	0
G35	Multiple sclerosis	98	40	58	93	39	54	4	0	4	1	1	0
G37	Other demyelinating diseases of central nervous system	3	0	3	3	0	3	0	0	0	0	0	0
G40	Epilepsy	10	4	6	9	4	5	1	0	1	0	0	0
G41	Status epilepticus	6	3	3	6	3	3	0	0	0	0	0	0
G45	Transient cerebral ischemic attacks and related syndromes	7	2	5	7	2	5	0	0	0	0	0	0
G47	Sleep disorders	14	8	6	13	7	6	1	1	0	0	0	0
G50	Disorders of trigeminal nerve	1	0	1	1	0	1	0	0	0	0	0	0
G60	Hereditary and idiopathic neuropathy	1	1	0	1	1	0	0	0	0	0	0	0
G61	Inflammatory polyneuropathy	7	4	3	7	4	3	0	0	0	0	0	0
G62	Other polyneuropathies	5	2	3	5	2	3	0	0	0	0	0	0
G70	Myasthenia gravis and other myoneural disorders	24	13	11	24	13	11	0	0	0	0	0	0
G71	Primary disorders of muscles	26	16	10	25	15	10	1	1	0	0	0	0
G72	Other myopathies	7	3	4	7	3	4	0	0	0	0	0	0
G80	Infantile cerebral palsy	23	11	12	21	10	11	2	1	1	0	0	0
G81	Hemiplegia	7	1	6	7	1	6	0	0	0	0	0	0
G82	Paraplegia and tetraplegia	16	11	5	14	10	4	0	0	0	2	1	1
G83	Other paralytic syndromes	1	1	0	1	1	0	0	0	0	0	0	0
G90	Disorders of autonomic nervous system	3	3	0	3	3	0	0	0	0	0	0	0
G91	Hydrocephalus	20	13	7	19	13	6	1	0	1	0	0	0
G92	Toxic encephalopathy	2	2	0	2	2	0	0	0	0	0	0	0
G93	Other disorders of brain	178	97	81	158	84	74	17	11	6	3	2	1
G95	Other diseases of spinal cord	6	1	5	6	1	5	0	0	0	0	0	0
G96	Other disorders of central nervous system	2	1	1	2	1	1	0	0	0	0	0	0
G98	Other disorders of nervous system, not elsewhere classified	2	1	1	2	1	1	0	0	0	0	0	0
H54	Blindness and low vision	2	1	1	2	1	1	0	0	0	0	0	0
I02	Rheumatic chorea	1	0	1	1	0	1	0	0	0	0	0	0
I05	Rheumatic mitral valve diseases	33	7	26	32	7	25	1	0	1	0	0	0
I06	Rheumatic aortic valve diseases	4	1	3	4	1	3	0	0	0	0	0	0
I07	Rheumatic tricuspid valve diseases	6	1	5	5	1	4	1	0	1	0	0	0
I08	Multiple valve diseases	7	3	4	7	3	4	0	0	0	0	0	0
I09	Other rheumatic heart diseases	26	6	20	26	6	20	0	0	0	0	0	0
I10	Essential (primary) hypertension	323	96	227	307	88	219	10	4	6	6	4	2
I11	Hypertensive heart disease	225	80	145	206	70	136	14	8	6	5	2	3

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
I12	Hypertensive renal disease	126	45	81	102	38	64	23	7	16	1	0	1
I13	Hypertensive heart and renal disease	24	9	15	22	7	15	2	2	0	0	0	0
I20	Angina pectoris	13	5	8	12	5	7	1	0	1	0	0	0
I21	Acute myocardial infarction	3,706	1,848	1,858	3,552	1,779	1,773	115	48	67	39	21	18
I24	Other acute ischemic heart diseases	55	29	26	51	28	23	2	1	1	2	0	2
I25	Chronic ischemic heart disease	5,924	2,919	3,005	5,721	2,812	2,909	164	85	79	39	22	17
I26	Pulmonary embolism	175	67	108	167	63	104	7	3	4	1	1	0
I27	Other pulmonary heart diseases	131	49	82	120	46	74	10	3	7	1	0	1
I28	Other diseases of pulmonary vessels	2	2	0	2	2	0	0	0	0	0	0	0
I31	Other diseases of pericardium	13	5	8	10	4	6	2	1	1	1	0	1
I33	Acute and subacute endocarditis	16	9	7	15	8	7	1	1	0	0	0	0
I34	Nonrheumatic mitral valve disorders	71	25	46	70	24	46	1	1	0	0	0	0
I35	Nonrheumatic aortic valve disorders	341	124	217	334	122	212	5	1	4	2	1	1
I38	Endocarditis, valve unspecified	88	32	56	85	30	55	3	2	1	0	0	0
I40	Acute myocarditis	9	6	3	9	6	3	0	0	0	0	0	0
I42	Cardiomyopathy	441	264	177	417	247	170	24	17	7	0	0	0
I44	Atrioventricular and left bundle-branch block	13	4	9	13	4	9	0	0	0	0	0	0
I45	Other conduction disorders	9	5	4	9	5	4	0	0	0	0	0	0
I46	Cardiac arrest	606	281	325	579	270	309	24	9	15	3	2	1
I47	Paroxysmal tachycardia	15	8	7	14	8	6	1	0	1	0	0	0
I48	Atrial fibrillation and flutter	279	96	183	271	90	181	4	3	1	4	3	1
I49	Other cardiac arrhythmias	403	221	182	376	203	173	22	15	7	5	3	2
I50	Heart failure	1,869	668	1,201	1,803	640	1,163	59	24	35	7	4	3
I51	Complications and ill-defined descriptions of heart disease	189	96	93	180	89	91	8	6	2	1	1	0
I60	Subarachnoid hemorrhage	131	45	86	120	41	79	8	3	5	3	1	2
I61	Intracerebral hemorrhage	403	196	207	382	186	196	12	5	7	9	5	4
I62	Other nontraumatic intracranial hemorrhage	240	131	109	221	123	98	14	6	8	5	2	3
I63	Cerebral infarction	271	99	172	263	98	165	7	1	6	1	0	1
I64	Stroke, not specified as hemorrhage or infarction	1,744	586	1,158	1,681	565	1,116	51	18	33	12	3	9
I67	Other cerebrovascular diseases	129	46	83	122	44	78	5	1	4	2	1	1
I69	Sequelae of cerebrovascular disease	639	232	407	604	217	387	30	13	17	5	2	3
I70	Atherosclerosis	293	94	199	287	93	194	6	1	5	0	0	0
I71	Aortic aneurysm and dissection	347	189	158	332	184	148	13	4	9	2	1	1
I72	Other aneurysm	17	12	5	17	12	5	0	0	0	0	0	0
I73	Other peripheral vascular diseases	217	86	131	205	82	123	11	3	8	1	1	0
I74	Arterial embolism and thrombosis	26	14	12	26	14	12	0	0	0	0	0	0
I77	Other disorders of arteries and arterioles	22	14	8	21	13	8	0	0	0	1	1	0
I78	Diseases of capillaries	1	0	1	1	0	1	0	0	0	0	0	0
I80	Phlebitis and thrombophlebitis	48	17	31	47	16	31	1	1	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
I81	Portal vein thrombosis	1	1	0	1	1	0	0	0	0	0	0	0
I82	Other venous embolism and thrombosis	2	1	1	2	1	1	0	0	0	0	0	0
I83	Varicose veins of lower extremities	7	6	1	5	4	1	2	2	0	0	0	0
I85	Esophageal varices	3	2	1	1	0	1	1	1	0	1	1	0
I86	Varicose veins of other sites	2	2	0	1	1	0	0	0	0	1	1	0
I87	Other disorders of veins	1	1	0	1	1	0	0	0	0	1	1	0
I89	Other noninfective disorders of lymphatic vessels and lymph nodes	2	1	1	0	0	0	2	1	1	0	0	0
I95	Hypotension	12	6	6	10	5	5	2	1	1	0	0	0
I99	Other and unspecified disorders of circulatory system	7	5	2	6	4	2	1	1	0	0	0	0
J05	Acute obstructive laryngitis [croup] and epiglottitis	1	0	1	1	0	1	0	0	0	0	0	0
J11	Influenza, virus not identified	5	1	4	5	1	4	0	0	0	0	0	0
J12	Viral pneumonia, not elsewhere classified	3	2	1	3	2	1	0	0	0	0	0	0
J13	Pneumonia due to Streptococcus pneumoniae	9	2	7	7	1	6	1	0	1	1	1	0
J14	Pneumonia due to Hemophilus influenzae	1	0	1	1	0	1	0	0	0	0	0	0
J15	Bacterial pneumonia, not elsewhere classified	68	38	30	66	36	30	2	2	0	0	0	0
J18	Pneumonia, organism unspecified	1,964	828	1,136	1,900	797	1,103	48	23	25	16	8	8
J20	Acute bronchitis	7	2	5	7	2	5	0	0	0	0	0	0
J32	Chronic sinusitis	2	0	2	2	0	2	0	0	0	0	0	0
J38	Diseases of vocal cords and larynx, not elsewhere classified	4	3	1	4	3	1	0	0	0	0	0	0
J39	Other diseases of upper respiratory tract	8	4	4	7	3	4	1	1	0	0	0	0
J40	Bronchitis, not specified as acute or chronic	11	5	6	10	4	6	1	1	0	0	0	0
J42	Unspecified chronic bronchitis	15	8	7	15	8	7	0	0	0	0	0	0
J43	Empysema	354	175	179	345	167	178	4	3	1	5	5	0
J44	Other chronic obstructive pulmonary disease	2,252	971	1,281	2,207	945	1,262	34	17	17	11	9	2
J45	Asthma	81	29	52	69	21	48	11	7	4	1	1	0
J46	Status asthmaticus	7	2	5	5	1	4	1	0	1	1	1	0
J47	Bronchiectasis	24	2	22	22	1	21	2	1	1	0	0	0
J61	Pneumoconiosis due to asbestos and other mineral fibers	11	11	0	11	11	0	0	0	0	0	0	0
J62	Pneumoconiosis due to dust containing silica	1	1	0	1	1	0	0	0	0	0	0	0
J63	Pneumoconiosis due to other inorganic dusts	1	0	1	1	0	1	0	0	0	0	0	0
J67	Hypersensitivity pneumonitis due to organic dust	1	0	1	1	0	1	0	0	0	0	0	0
J69	Pneumonitis due to solids and liquids	1	0	1	1	0	1	0	0	0	0	0	0
J80	Adult respiratory distress syndrome	582	260	322	561	247	314	16	9	7	5	4	1
J81	Pulmonary edema	51	31	20	47	29	18	4	2	2	0	0	0
J82	Pulmonary eosinophilia, not elsewhere classified	19	9	10	18	8	10	1	1	0	0	0	0
J84	Other interstitial pulmonary diseases	2	1	1	2	1	1	0	0	0	0	0	0
J85	Abscess of lung and mediastinum	308	162	146	292	156	136	13	4	9	3	2	1
J86	Pyothorax	8	3	5	8	3	5	0	0	0	0	0	0
J90	Pleural effusion, not elsewhere classified	10	8	2	8	6	2	1	1	0	1	1	0
		34	20	14	32	19	13	2	1	1	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
J93	Pneumothorax	11	5	6	11	5	6	0	0	0	0	0	0
J94	Other pleural conditions	5	3	2	5	3	2	0	0	0	0	0	0
J96	Respiratory failure, not elsewhere classified	257	82	175	246	78	168	7	3	4	4	1	3
J98	Other respiratory disorders	142	63	79	137	60	77	3	2	1	2	1	1
K11	Diseases of salivary glands	3	2	1	3	2	1	0	0	0	0	0	0
K20	Esophagitis	2	1	1	2	1	1	0	0	0	0	0	0
K21	Gastroesophageal reflux disease	10	5	5	10	5	5	0	0	0	0	0	0
K22	Other diseases of esophagus	37	14	23	37	14	23	0	0	0	0	0	0
K25	Gastric ulcer	14	8	6	14	8	6	0	0	0	0	0	0
K26	Duodenal ulcer	23	9	14	23	9	14	0	0	0	0	0	0
K27	Peptic ulcer, site unspecified	14	10	4	14	10	4	0	0	0	0	0	0
K28	Gastrojejunal ulcer	3	3	0	3	3	0	0	0	0	0	0	0
K29	Gastritis and duodenitis	10	3	7	10	3	7	0	0	0	0	0	0
K31	Other diseases of stomach and duodenum	16	6	10	15	5	10	1	1	0	0	0	0
K35	Acute appendicitis	4	3	1	3	3	0	0	0	0	1	0	1
K37	Unspecified appendicitis	2	1	1	2	1	1	0	0	0	0	0	0
K38	Other diseases of appendix	1	1	0	1	1	0	0	0	0	0	0	0
K40	Inguinal hernia	6	3	3	5	3	2	1	0	1	0	0	0
K41	Femoral hernia	3	2	1	3	2	1	0	0	0	0	0	0
K42	Umbilical hernia	2	0	2	2	0	2	0	0	0	0	0	0
K43	Ventral hernia	7	1	6	7	1	6	0	0	0	0	0	0
K44	Diaphragmatic hernia	11	3	8	11	3	8	0	0	0	0	0	0
K46	Unspecified abdominal hernia	7	2	5	7	2	5	0	0	0	0	0	0
K50	Crohn's disease [regional enteritis]	21	7	14	20	7	13	1	0	1	0	0	0
K51	Ulcerative colitis	8	4	4	8	4	4	0	0	0	0	0	0
K52	Other noninfective gastroenteritis and colitis	60	20	40	56	20	36	4	0	4	0	0	0
K55	Vascular disorders of intestine	229	64	165	214	61	153	12	2	10	3	1	2
K56	Paralytic ileus and intestinal obstruction without hernia	174	68	106	168	63	105	5	4	1	1	1	0
K57	Diverticular disease of intestine	69	12	57	67	12	55	1	0	1	1	0	1
K59	Other functional intestinal disorders	15	6	9	12	3	9	3	3	0	0	0	0
K61	Abscess of anal and rectal regions	3	1	2	3	1	2	0	0	0	0	0	0
K62	Other diseases of anus and rectum	11	5	6	11	5	6	0	0	0	0	0	0
K63	Other diseases of intestine	77	31	46	76	31	45	1	0	1	0	0	0
K65	Peritonitis	41	20	21	39	19	20	1	0	1	1	1	0
K66	Other disorders of peritoneum	5	3	2	5	3	2	0	0	0	0	0	0
K70	Alcoholic liver disease	178	128	50	168	120	48	6	6	0	0	0	0
K72	Hepatic failure, not elsewhere classified	153	97	56	145	91	54	7	5	2	4	2	2
K73	Chronic hepatitis, not elsewhere classified	15	7	8	13	7	6	2	0	2	0	0	0
K74	Fibrosis and cirrhosis of liver	406	231	175	391	223	168	11	6	5	4	2	2

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
K75	Other inflammatory liver diseases	19	6	13	17	5	12	1	0	1	1	1	0
K76	Other diseases of liver	92	56	36	85	53	32	4	3	1	3	0	3
K80	Cholelithiasis	17	2	15	17	2	15	0	0	0	0	0	0
K81	Cholecystitis	27	16	11	26	15	11	0	0	0	1	1	0
K82	Other diseases of gallbladder	6	1	5	6	1	5	0	0	0	0	0	0
K83	Other diseases of biliary tract	32	19	13	30	18	12	2	1	1	0	0	0
K85	Acute pancreatitis	63	25	38	61	23	38	2	2	0	0	0	0
K86	Other diseases of pancreas	20	9	11	20	9	11	0	0	0	0	0	0
K90	Intestinal malabsorption	2	0	2	2	0	2	0	0	0	0	0	0
K92	Other diseases of the digestive system	292	109	183	275	101	174	13	7	6	4	1	3
L02	Cutaneous abscess, furuncle, and carbuncle	4	2	2	2	1	1	2	1	1	0	0	0
L03	Cellulitis	24	11	13	24	11	13	0	0	0	0	0	0
L08	Other local infections of skin and subcutaneous tissue	3	0	3	3	0	3	0	0	0	0	0	0
L12	Pemphigoid	2	0	2	2	0	2	0	0	0	0	0	0
L40	Psoriasis	2	1	1	2	1	1	0	0	0	0	0	0
L51	Erythema multiforme	1	0	1	1	0	1	0	0	0	0	0	0
L89	Decubitus ulcer	20	8	12	20	8	12	0	0	0	0	0	0
L93	Lupus erythematosus	3	0	3	2	0	2	1	0	1	0	0	0
L97	Ulcer of lower limb, not elsewhere classified	2	1	1	1	0	1	1	1	0	0	0	0
L98	Other disorders of skin and subcutaneous tissue, not elsewhere classified	4	2	2	4	2	2	0	0	0	0	0	0
M00	Pyogenic arthritis	2	1	1	2	1	1	0	0	0	0	0	0
M05	Seropositive rheumatoid arthritis	7	3	4	7	3	4	0	0	0	0	0	0
M06	Other rheumatoid arthritis	48	6	42	47	6	41	1	0	1	0	0	0
M10	Gout	4	2	2	3	2	1	1	0	1	0	0	0
M13	Other arthritis	5	0	5	5	0	5	0	0	0	0	0	0
M19	Other arthrosis	23	5	18	23	5	18	0	0	0	0	0	0
M25	Other joint disorders, not elsewhere classified	1	0	1	1	0	1	0	0	0	0	0	0
M30	Polyarteritis nodosa and related conditions	3	2	1	3	2	1	0	0	0	0	0	0
M31	Other necrotizing vasculopathies	21	10	11	17	8	9	4	2	2	0	0	0
M32	Systemic lupus erythematosus	16	2	14	11	1	10	3	1	2	2	0	2
M33	Dermatopolymyositis	5	2	3	4	1	3	1	1	0	0	0	0
M34	Systemic sclerosis	34	9	25	31	9	22	1	0	1	2	0	2
M35	Other systemic involvement of connective tissue	14	1	13	14	1	13	0	0	0	0	0	0
M40	Kyphosis and lordosis	1	0	1	1	0	1	0	0	0	0	0	0
M41	Scoliosis	4	0	4	4	0	4	0	0	0	0	0	0
M45	Ankylosing spondylitis	1	1	0	1	1	0	0	0	0	0	0	0
M46	Other inflammatory spondylopathies	4	1	3	4	1	3	0	0	0	0	0	0
M47	Spondylosis	2	1	1	2	1	1	0	0	0	0	0	0
M48	Other spondylopathies	5	2	3	5	2	3	0	0	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals		Whites		Blacks		Other	
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male
M50	Cervical disc disorders	1	1	0	0	0	0	0	0
M51	Other intervertebral disc disorders	1	1	0	1	1	0	0	0
M54	Dorsalgia	1	0	1	1	0	1	0	0
M60	Myositis	3	0	3	3	0	3	0	0
M62	Other disorders of muscle	19	10	9	18	9	9	0	0
M67	Other disorders of synovium and tendon	1	1	0	1	1	0	0	0
M71	Other bursopathies	1	1	0	1	1	0	0	0
M72	Fibroblastic disorders	6	3	3	5	3	2	1	0
M79	Other soft tissue disorders, not elsewhere classified	2	1	1	2	1	1	0	0
M80	Osteoporosis with pathological fracture	10	0	10	9	0	9	1	0
M81	Osteoporosis without pathological fracture	29	3	26	29	3	26	0	0
M84	Disorders of continuity of bone	2	0	2	2	0	2	0	0
M86	Osteomyelitis	33	17	16	27	14	13	6	3
M88	Paget's disease of bone [osteitis deformans]	3	1	2	3	1	2	0	0
M89	Other disorders of bone	2	0	2	2	0	2	0	0
N02	Recurrent and persistent hematuria	1	1	0	1	1	0	0	0
N03	Chronic nephritic syndrome	2	2	0	2	2	0	0	0
N04	Nephrotic syndrome	3	2	1	3	2	1	0	0
N05	Unspecified nephritic syndrome	3	1	2	3	1	2	0	0
N10	Acute tubulo-interstitial nephritis	1	1	0	1	1	0	0	0
N12	Tubulo-interstitial nephritis, not specified as acute or chronic	3	1	2	3	1	2	0	0
N13	Obstructive and reflux uropathy	8	5	3	8	5	3	0	0
N15	Other renal tubulo-interstitial diseases	2	1	1	2	1	1	0	0
N17	Acute renal failure	240	102	138	227	97	130	10	4
N18	Chronic renal failure	434	230	204	390	210	180	38	17
N19	Unspecified renal failure	606	311	295	567	286	281	30	19
N20	Calculus of kidney and ureter	10	4	6	9	3	6	1	1
N25	Disorders resulting from impaired renal tubular function	1	0	1	1	0	1	0	0
N26	Unspecified contracted kidney	2	2	0	2	2	0	0	0
N28	Other disorders of kidney and ureter, not elsewhere classified	20	12	8	17	11	6	3	1
N31	Neuromuscular dysfunction of bladder, not elsewhere classified	6	1	5	6	1	5	0	0
N32	Other disorders of bladder	9	3	6	9	3	6	0	0
N36	Other disorders of urethra	1	0	1	0	0	0	0	0
N39	Other disorders of urinary system	352	110	242	341	105	236	10	4
N40	Hyperplasia of prostate	11	11	0	10	10	0	0	0
N42	Other disorders of prostate	1	1	0	1	1	0	0	0
N48	Other disorders of penis	1	1	0	1	1	0	0	0
N49	Inflammatory disorders of male genital organs, not elsewhere classified	1	1	0	1	1	0	0	0
N63	Unspecified lump in breast	2	0	2	2	0	2	0	0



Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
N71	Inflammatory disease of uterus, except cervix	1	0	1	0	0	0	1	0	1	0	0	0
N76	Other inflammation of vagina and vulva	1	0	1	1	0	1	0	0	0	0	0	0
N81	Female genital prolapse	1	0	1	1	0	1	0	0	0	0	0	0
N83	Noninflammatory disorders of ovary, fallopian tube, and broad ligament	2	0	2	2	0	2	0	0	0	0	0	0
N93	Other abnormal uterine and vaginal bleeding	2	0	2	2	0	2	0	0	0	0	0	0
N94	Pain and other conditions associated with female genital organs and menstrual cycle	1	0	1	1	0	1	0	0	0	0	0	0
O41	Other disorders of amniotic fluid and membranes	1	0	1	1	0	1	0	0	0	0	0	0
O88	Obstetric embolism	1	0	1	1	0	1	0	0	0	0	0	0
P00	Newborn affected by maternal conditions that may be unrelated to present pregnancy	1	1	0	1	1	0	0	0	0	0	0	0
P01	Newborn affected by maternal complications of pregnancy	30	19	11	23	13	10	5	5	0	2	1	1
P02	Newborn affected by complications of placenta, cord, and membranes	20	12	8	15	9	6	5	3	2	0	0	0
P03	Newborn affected by other complications of labor and delivery	1	0	1	1	0	1	0	0	0	0	0	0
P04	Newborn affected by noxious influences transmitted via placenta or breast milk	1	0	1	1	0	1	0	0	0	0	0	0
P05	Slow fetal growth and fetal malnutrition	1	0	1	1	0	1	0	0	0	0	0	0
P07	Disorders related to short gestation and low birth weight, not elsewhere classified	83	46	37	57	35	22	19	10	9	7	1	6
P10	Intracranial laceration and hemorrhage due to birth injury	7	5	2	5	5	0	0	0	0	2	0	2
P20	Intrauterine hypoxia	3	1	2	2	1	1	1	0	1	0	0	0
P21	Birth asphyxia	10	3	7	8	2	6	2	1	1	0	0	0
P22	Respiratory distress of newborn	21	16	5	18	15	3	3	1	2	0	0	0
P23	Congenital pneumonia	1	1	0	1	1	0	0	0	0	0	0	0
P24	Neonatal aspiration syndromes	1	0	1	1	0	1	0	0	0	0	0	0
P25	Interstitial emphysema and related conditions originating in the perinatal period	4	2	2	3	2	1	1	0	1	0	0	0
P26	Pulmonary hemorrhage originating in the perinatal period	6	4	2	6	4	2	0	0	0	0	0	0
P27	Chronic respiratory disease originating in the perinatal period	1	0	1	1	0	1	0	0	0	0	0	0
P28	Other respiratory conditions originating in the perinatal period	6	6	0	6	6	0	0	0	0	0	0	0
P29	Cardiovascular disorders originating in the perinatal period	28	18	10	23	15	8	5	3	2	0	0	0
P35	Congenital viral diseases	1	0	1	1	0	1	0	0	0	0	0	0
P36	Bacterial sepsis of newborn	10	5	5	7	3	4	3	2	1	0	0	0
P37	Other congenital infectious and parasitic diseases	2	0	2	2	0	2	0	0	0	0	0	0
P39	Other infections specific to the perinatal period	1	0	1	1	0	1	0	0	0	0	0	0
P52	Intracranial nontraumatic hemorrhage of fetus and newborn	1	1	0	1	1	0	0	0	0	0	0	0
P60	Disseminated intravascular coagulation of newborn	2	1	1	2	1	1	0	0	0	0	0	0
P77	Necrotizing enterocolitis of newborn	1	0	1	1	0	1	0	0	0	0	0	0
P83	Other conditions of integument specific to newborn	3	2	1	3	2	1	0	0	0	0	0	0
P90	Convulsions of newborn	1	1	0	1	1	0	0	0	0	0	0	0
P96	Other conditions originating in the perinatal period	2	1	1	2	1	1	0	0	0	0	0	0
Q00	Anencephaly and similar malformations	2	1	1	2	1	1	0	0	0	0	0	0
Q01	Encephalocele	1	1	0	1	1	0	0	0	0	0	0	0
Q02	Microcephaly	2	1	1	2	1	1	0	0	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
Q03	Congenital hydrocephalus	5	4	1	4	3	1	1	1	0	0	0	0
Q04	Other congenital malformations of brain	4	4	0	4	4	0	0	0	0	0	0	0
Q05	Spina bifida	2	1	1	2	1	1	0	0	0	0	0	0
Q07	Other congenital malformations of nervous system	1	1	0	1	1	0	0	0	0	0	0	0
Q20	Congenital malformations of cardiac chambers and connections	2	2	0	2	2	0	0	0	0	0	0	0
Q21	Congenital malformations of cardiac septa	18	5	13	16	4	12	1	1	0	1	0	1
Q22	Congenital malformations of pulmonary and tricuspid valves	3	1	2	3	1	2	0	0	0	0	0	0
Q23	Congenital malformations of aortic and mitral valves	6	3	3	5	3	2	1	0	1	0	0	0
Q24	Other congenital malformations of heart	22	10	12	22	10	12	0	0	0	0	0	0
Q25	Congenital malformations of great arteries	3	1	2	3	1	2	0	0	0	0	0	0
Q26	Congenital malformations of great veins	1	0	1	1	0	1	0	0	0	0	0	0
Q27	Other congenital malformations of peripheral vascular system	5	2	3	4	1	3	1	1	0	0	0	0
Q28	Other congenital malformations of circulatory system	4	1	3	4	1	3	0	0	0	0	0	0
Q31	Congenital malformations of larynx	1	1	0	1	1	0	0	0	0	0	0	0
Q33	Congenital malformations of lung	13	7	6	10	6	4	3	1	2	0	0	0
Q37	Cleft palate with cleft lip	1	0	1	1	0	1	0	0	0	0	0	0
Q39	Congenital malformations of esophagus	1	0	1	1	0	1	0	0	0	0	0	0
Q53	Undescended testicle	1	1	0	1	1	0	0	0	0	0	0	0
Q60	Renal agenesis and other reduction defects of kidney	1	0	1	1	0	1	0	0	0	0	0	0
Q61	Cystic kidney disease	4	2	2	4	2	2	0	0	0	0	0	0
Q67	Congenital musculoskeletal deformities of head, face, spine, and chest	1	1	0	1	1	0	0	0	0	0	0	0
Q78	Other osteochondrodysplasias	1	1	0	1	1	0	0	0	0	0	0	0
Q79	Congenital malformations of musculoskeletal system, not elsewhere classified	4	3	1	3	3	0	1	0	1	0	0	0
Q82	Other congenital malformations of skin	1	1	0	1	1	0	0	0	0	0	0	0
Q85	Phakomatoses, not elsewhere classified	2	2	0	2	2	0	0	0	0	0	0	0
Q87	Other specified congenital malformation syndromes affecting multiple systems	8	6	2	5	4	1	2	1	1	1	1	0
Q89	Other congenital malformations, not elsewhere classified	8	6	2	8	6	2	0	0	0	0	0	0
Q90	Down's syndrome	22	8	14	22	8	14	0	0	0	0	0	0
Q91	Edwards' syndrome and Patau's syndrome	14	6	8	11	4	7	3	2	1	0	0	0
Q92	Other trisomies and partial trisomies of autosomes, not elsewhere classified	2	1	1	2	1	1	0	0	0	0	0	0
Q93	Monosomies and deletions from the autosomes, not elsewhere classified	1	1	0	1	1	0	0	0	0	0	0	0
R00	Abnormalities of heart beat	3	1	2	3	1	2	0	0	0	0	0	0
R02	Gangrene, not elsewhere classified	7	4	3	6	4	2	1	0	1	0	0	0
R04	Hemorrhage from respiratory passages	3	1	2	2	0	2	1	1	0	0	0	0
R05	Cough	1	1	0	1	1	0	0	0	0	0	0	0
R06	Abnormalities of breathing	8	2	6	8	2	6	0	0	0	0	0	0
R07	Pain in throat and chest	1	0	1	1	0	1	0	0	0	0	0	0
R09	Other symptoms and signs involving the circulatory and respiratory systems	90	39	51	81	36	45	8	3	5	1	0	1
R10	Abdominal and pelvic pain	3	0	3	3	0	3	0	0	0	0	0	0

Table C-16, 2002 (continued)

ICD	Code	Cause of Death	Totals			Whites			Blacks			Other		
			Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
R13	Dysphagia		3	0	3	3	0	3	0	0	0	0	0	0
R17	Unspecified jaundice		1	0	1	1	0	1	0	0	0	0	0	0
R19	Other symptoms and signs involving the digestive system and abdomen		4	2	2	4	2	2	0	0	0	0	0	0
R29	Other symptoms and signs involving the nervous and musculoskeletal system		2	1	1	2	1	1	0	0	0	0	0	0
R41	Other symptoms and signs involving cognitive functions and awareness		1	0	1	1	0	1	0	0	0	0	0	0
R53	Malaise and fatigue		4	2	2	4	2	2	0	0	0	0	0	0
R54	Senility		26	3	23	26	3	23	0	0	0	0	0	0
R55	Syncope and collapse		1	0	1	1	0	1	0	0	0	0	0	0
R56	Convulsions, not elsewhere classified		47	29	18	40	25	15	7	4	3	0	0	0
R57	Shock, not elsewhere classified		42	23	19	40	21	19	2	2	0	0	0	0
R58	Hemorrhage, not elsewhere classified		17	11	6	14	9	5	2	1	1	1	1	0
R60	Edema, not elsewhere classified		2	0	2	2	0	2	0	0	0	0	0	0
R62	Lack of expected normal physiological development		101	24	77	99	24	75	2	0	2	0	0	0
R63	Symptoms and signs concerning food and fluid intake		1	0	1	1	0	1	0	0	0	0	0	0
R64	Cachexia		7	3	4	7	3	4	0	0	0	0	0	0
R79	Other abnormal findings of blood chemistry		2	0	2	2	0	2	0	0	0	0	0	0
R91	Abnormal findings on diagnostic imaging of lung		6	2	4	5	2	3	1	0	1	0	0	0
R95	Sudden infant death syndrome		17	9	8	9	5	4	7	3	4	1	1	0
R96	Other sudden death, cause unknown		6	1	5	5	1	4	1	0	1	0	0	0
R99	Other ill-defined and unspecified causes of mortality		340	224	116	286	184	102	35	27	8	19	13	6
V02	Pedestrian injured in collision with two- or three-wheeled motor vehicle		1	1	0	1	1	0	0	0	0	0	0	0
V03	Pedestrian injured in collision with car, pickup truck, or van		27	18	9	24	15	9	1	1	0	2	2	0
V04	Pedestrian injured in collision with heavy transport vehicle or bus		5	4	1	5	4	1	0	0	0	0	0	0
V05	Pedestrian injured in collision with railway train or railway vehicle		4	2	2	2	1	1	2	1	1	0	0	0
V09	Pedestrian injured in other and unspecified transport accidents		38	29	9	33	26	7	4	2	2	1	1	0
V18	Pedal cyclist injured in noncollision transport accident		1	0	1	1	0	1	0	0	0	0	0	0
V19	Pedal cyclist injured in other and unspecified transport accidents		2	2	0	2	2	0	0	0	0	0	0	0
V22	Motorcycle rider injured in collision with two- or three-wheeled motor vehicle		1	1	0	1	1	0	0	0	0	0	0	0
V23	Motorcycle rider injured in collision with car, pickup truck, or van		7	6	1	7	6	1	0	0	0	0	0	0
V27	Motorcycle rider injured in collision with fixed or stationary object		7	7	0	7	7	0	0	0	0	0	0	0
V28	Motorcycle rider injured in noncollision transport accident		4	3	1	4	3	1	0	0	0	0	0	0
V29	Motorcycle rider injured in other and unspecified transport accidents		36	33	3	33	30	3	3	3	0	0	0	0
V42	Car occupant injured in collision with two- or three-wheeled motor vehicle		1	1	0	1	1	0	0	0	0	0	0	0
V43	Car occupant injured in collision with car, pickup truck, or van		15	7	8	15	7	8	0	0	0	0	0	0
V44	Car occupant injured in collision with heavy transport vehicle or bus		6	5	1	5	4	1	0	0	0	1	1	0
V45	Car occupant injured in collision with railway train or railway vehicle		2	0	2	2	0	2	0	0	0	0	0	0
V47	Car occupant injured in collision with fixed or stationary object		37	24	13	34	22	12	3	2	1	0	0	0
V48	Car occupant injured in noncollision transport accident		5	2	3	5	2	3	0	0	0	0	0	0
V49	Car occupant injured in other and unspecified transport accidents		11	7	4	9	6	3	1	1	0	1	0	1

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
V53	Occupant of pickup truck or van injured in collision with car, pickup truck, or van	1	1	0	1	1	0	0	0	0	0	0	0
V57	Occupant of pickup truck or van injured in collision with fixed or stationary object	2	1	1	2	1	1	0	0	0	0	0	0
V68	Occupant of heavy transport vehicle injured in noncollision transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V78	Bus occupant injured in noncollision transport accident	1	0	1	1	0	1	0	0	0	0	0	0
V82	Occupant of streetcar injured in transport accident	1	0	1	1	0	1	0	0	0	0	0	0
V84	Occupant of special vehicle mainly used in agriculture injured in transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V85	Occupant of special construction vehicle injured in transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V86	Occupant of special all-terrain or other motor vehicle designed primarily for off-road use, injured in transport accident	5	3	2	5	3	2	0	0	0	0	0	0
V87	Traffic accident of specified type but victim's mode of transport unknown	30	23	7	28	21	7	1	1	0	1	1	0
V88	Nontraffic accident of specified type but victim's mode of transport unknown	12	6	6	10	6	4	1	0	1	1	0	1
V89	Motor- or nonmotor-vehicle accident, type of vehicle unspecified	295	191	104	270	175	95	18	14	4	7	2	5
V92	Water-transport-related drowning and submersion without accident to watercraft	1	1	0	1	1	0	0	0	0	0	0	0
V94	Other and unspecified water transport accidents	5	5	0	5	5	0	0	0	0	0	0	0
V95	Accident to powered aircraft causing injury to occupant	3	2	1	3	2	1	0	0	0	0	0	0
V97	Other specified air transport accidents	1	0	1	1	0	1	0	0	0	0	0	0
W00	Fall on same level involving ice and snow	4	3	1	4	3	1	0	0	0	0	0	0
W01	Fall on same level from slipping, tripping, and stumbling	4	1	3	4	1	3	0	0	0	0	0	0
W02	Fall involving ice skates, skis, roller skates, or skateboards	1	1	0	1	1	0	0	0	0	0	0	0
W03	Other fall on same level due to collision with, or pushing by, another person	1	1	0	1	1	0	0	0	0	0	0	0
W06	Fall involving bed	8	3	5	7	2	5	1	1	0	0	0	0
W07	Fall involving chair	2	2	0	2	2	0	0	0	0	0	0	0
W08	Fall involving other furniture	1	0	1	1	0	1	0	0	0	0	0	0
W10	Fall on and from stairs and steps	45	31	14	43	30	13	1	1	0	1	0	1
W11	Fall on and from ladder	3	3	0	3	3	0	0	0	0	0	0	0
W12	Fall on and from scaffolding	2	2	0	2	2	0	0	0	0	0	0	0
W13	Fall from, out of, or through building or structure	10	8	2	8	7	1	2	1	1	0	0	0
W14	Fall from tree	3	2	1	3	2	1	0	0	0	0	0	0
W15	Fall from cliff	2	2	0	2	2	0	0	0	0	0	0	0
W16	Diving or jumping into water causing injury other than drowning or submersion	2	2	0	2	2	0	0	0	0	0	0	0
W17	Other fall from one level to another	5	4	1	4	3	1	0	0	0	1	1	0
W18	Other fall on same level	18	10	8	16	8	8	1	1	0	1	1	0
W19	Unspecified fall	111	60	51	108	58	50	0	0	0	3	2	1
W20	Struck by thrown, projected, or falling object	2	1	1	1	1	0	0	0	0	1	0	1
W22	Striking against or struck by other objects	4	2	2	4	2	2	0	0	0	0	0	0
W29	Contact with other powered hand tools and household machinery	1	1	0	1	1	0	0	0	0	0	0	0
W30	Contact with agricultural machinery	1	1	0	1	1	0	0	0	0	0	0	0
W31	Contact with other and unspecified machinery	5	4	1	4	3	1	1	1	0	0	0	0
W32	Handgun discharge	1	1	0	0	0	0	1	1	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
W34	Discharge from other and unspecified firearms	5	5	0	3	3	0	2	2	0	0	0	0
W44	Foreign body entering into or through eye or natural orifice	1	1	0	1	1	0	0	0	0	0	0	0
W55	Bitten or struck by other mammals	1	0	1	1	0	1	0	0	0	0	0	0
W65	Drowning and submersion while in bathtub	4	2	2	3	1	2	1	1	0	0	0	0
W67	Drowning and submersion while in swimming pool	4	3	1	4	3	1	0	0	0	0	0	0
W69	Drowning and submersion while in natural water	12	12	0	11	11	0	1	1	0	0	0	0
W70	Drowning and submersion following fall into natural water	4	4	0	3	3	0	1	1	0	0	0	0
W73	Other specified drowning and submersion	9	8	1	8	7	1	1	1	0	0	0	0
W74	Unspecified drowning and submersion	14	12	2	12	11	1	2	1	1	0	0	0
W75	Accidental suffocation and strangulation in bed	1	1	0	1	1	0	0	0	0	0	0	0
W76	Other accidental hanging and strangulation	4	4	0	4	4	0	0	0	0	0	0	0
W78	Inhalation of gastric contents	6	4	2	6	4	2	0	0	0	0	0	0
W79	Inhalation and ingestion of food causing obstruction of respiratory tract	20	8	12	17	6	11	2	1	1	1	1	0
W80	Inhalation and ingestion of other objects causing obstruction of respiratory tract	113	66	47	106	63	43	5	3	2	2	0	2
W83	Other specified threats to breathing	3	2	1	3	2	1	0	0	0	0	0	0
W84	Unspecified threat to breathing	3	3	0	3	3	0	0	0	0	0	0	0
W85	Exposure to electric transmission lines	1	1	0	1	1	0	0	0	0	0	0	0
W87	Exposure to unspecified electric current	1	1	0	1	1	0	0	0	0	0	0	0
X00	Exposure to uncontrolled fire in building or structure	45	29	16	40	26	14	5	3	2	0	0	0
X01	Exposure to uncontrolled fire, not in building or structure	1	1	0	1	1	0	0	0	0	0	0	0
X02	Exposure to uncontrolled fire, not in building or structure	2	2	0	1	1	0	1	1	0	0	0	0
X03	Exposure to controlled fire, not in building or structure	1	1	0	1	1	0	0	0	0	0	0	0
X09	Exposure to unspecified smoke, fire, and flames	2	2	0	2	2	0	0	0	0	0	0	0
X30	Exposure to excessive natural heat	5	4	1	5	4	1	0	0	0	0	0	0
X31	Exposure to excessive natural cold	12	6	6	12	6	6	0	0	0	0	0	0
X33	Victim of lightning	1	1	0	1	1	0	0	0	0	0	0	0
X36	Victim of avalanche, landslide, and other earth movements	1	1	0	1	1	0	0	0	0	0	0	0
X39	Exposure to other and unspecified forces of nature	1	1	0	1	1	0	0	0	0	0	0	0
X40	Accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	2	0	2	2	0	2	0	0	0	0	0	0
X41	Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified	5	3	2	4	2	2	0	0	0	1	1	0
X42	Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	24	18	6	23	18	5	1	0	1	0	0	0
X44	Accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances	21	11	10	21	11	10	0	0	0	0	0	0
X45	Accidental poisoning by and exposure to alcohol	1	1	0	1	1	0	0	0	0	0	0	0
X47	Accidental poisoning by and exposure to other gases and vapors	3	2	1	3	2	1	0	0	0	0	0	0
X49	Accidental poisoning by & exposure to other & unspecified chemicals & noxious substances	1	1	0	1	1	0	0	0	0	0	0	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals		Whites		Blacks		Other	
		Tot	Fem	Tot	Male	Tot	Male	Tot	Male
X57	Unspecified privation	2	2	2	2	0	0	0	0
X59	Exposure to unspecified factor	250	102	238	94	144	8	4	0
X60	Intentional self-poisoning (suicide) by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	2	0	2	0	2	0	0	0
X61	Intentional self-poisoning (suicide) by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified	17	9	17	9	8	0	0	0
X62	Intentional self-poisoning (suicide) by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	16	10	15	10	5	1	0	1
X64	Intentional self-poisoning (suicide) by and exposure to other and unspecified drugs, medicaments, and biological substances	27	14	22	12	10	4	1	3
X67	Intentional self-poisoning (suicide) by and exposure to other gases and vapors	22	18	22	18	4	0	0	0
X69	Intentional self-poisoning (suicide) by and exposure to other and unspecified chemicals	4	3	4	3	1	0	0	0
X70	Intentional self harm (suicide) by hanging, strangulation, and suffocation	160	138	149	129	20	5	3	2
X71	Intentional self harm (suicide) by drowning and submersion	11	8	10	8	2	0	0	1
X72	Intentional self harm (suicide) by handgun discharge	9	9	8	8	0	1	0	0
X73	Intentional self harm (suicide) by rifle, shotgun, and larger firearm discharge	19	19	18	18	0	1	0	0
X74	Intentional self harm (suicide) by other and unspecified firearm discharge	70	65	64	59	5	2	0	4
X76	Intentional self harm (suicide) by smoke, fire, and flames	4	4	3	3	0	1	0	0
X78	Intentional self harm (suicide) by sharp object	20	19	18	17	1	1	0	1
X80	Intentional self harm (suicide) by jumping from a high place	18	15	17	14	3	0	0	1
X81	Intentional self harm (suicide) by jumping or lying before moving object	15	11	14	10	4	0	0	1
X82	Intentional self harm (suicide) by crashing of motor vehicle	2	0	2	0	2	0	0	0
X83	Intentional self harm (suicide) by other specified means	6	6	4	4	0	1	0	1
X84	Intentional self harm (suicide) by unspecified means	3	3	3	3	0	0	0	0
X91	Assault (homicide) by hanging, strangulation, and suffocation	8	2	6	1	5	2	1	1
X93	Assault (homicide) by handgun discharge	8	8	2	2	0	5	0	0
X94	Assault (homicide) by rifle, shotgun, and larger firearm discharge	4	2	3	2	1	1	0	0
X95	Assault (homicide) by other and unspecified firearm discharge	81	78	29	28	1	47	2	5
X97	Assault (homicide) by smoke, fire, and flames	2	2	2	2	0	0	0	0
X99	Assault (homicide) by sharp object	46	31	33	21	12	12	1	0
Y00	Assault (homicide) by blunt object	13	12	11	10	1	2	0	0
Y02	Assault (homicide) by pushing or placing victim before moving object	1	1	0	0	0	1	0	0
Y04	Assault (homicide) by bodily force	10	6	7	4	3	3	2	1
Y07	Other maltreatment syndromes	3	2	2	2	0	0	0	0
Y09	Assault (homicide) by unspecified means	8	7	8	7	1	0	0	0
Y10	Poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics, undetermined intent	2	0	2	0	2	0	0	0
Y11	Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified, undetermined intent	33	13	31	11	20	2	2	0

Table C-16, 2002 (continued)

ICD Code	Cause of Death	Totals			Whites			Blacks			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
Y12	Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent	464	336	128	430	312	118	32	22	10	2	2	0
Y13	Poisoning by and exposure to other drugs acting on the autonomic nervous system, undetermined intent	1	1	0	1	1	0	0	0	0	0	0	0
Y14	Poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances, undetermined intent	42	15	27	41	15	26	1	0	1	0	0	0
Y15	Poisoning by and exposure to alcohol, undetermined intent	2	1	1	2	1	1	0	0	0	0	0	0
Y17	Poisoning by and exposure to other gases and vapors, undetermined intent	1	1	0	1	1	0	0	0	0	0	0	0
Y20	Hanging, strangulation, and suffocation, undetermined intent	4	4	0	3	3	0	0	0	0	1	1	0
Y21	Drowning and submersion, undetermined intent	5	3	2	3	2	1	2	1	1	0	0	0
Y24	Other and unspecified firearm discharge, undetermined intent	1	0	1	1	0	1	0	0	0	0	0	0
Y26	Exposure to smoke, fire, and flames, undetermined intent	1	1	0	1	1	0	0	0	0	0	0	0
Y30	Falling, jumping, or pushed from a high place, undetermined intent	9	7	2	7	5	2	2	2	0	0	0	0
Y31	Falling, lying, or running before or into moving object, undetermined intent	1	0	1	1	0	1	0	0	0	0	0	0
Y33	Other specified events, undetermined intent	4	2	2	4	2	2	0	0	0	0	0	0
Y34	Unspecified event, undetermined intent	8	7	1	7	6	1	0	0	0	0	0	0
Y35	Legal intervention	4	3	1	3	3	0	1	0	1	1	1	0
Y42	Hormones and their synthetic substitutes and antagonists, not elsewhere classified	1	1	0	1	1	0	0	0	0	0	0	0
Y43	Primarily systemic agents	1	1	0	1	1	0	0	0	0	0	0	0
Y45	Analgesics, antipyretics, and anti-inflammatory drugs	1	0	1	1	0	1	0	0	0	0	0	0
Y83	Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure	29	14	15	28	14	14	1	0	1	0	0	0
Y84	Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure	1	1	0	1	1	0	0	0	0	0	0	0
Y85	Sequelae of transport accidents	3	2	1	2	2	0	1	0	1	0	0	0
Y86	Sequelae of other accidents	16	7	9	15	6	9	1	1	0	0	0	0
Y87	Sequelae of intentional self harm, assault, and events of undetermined intent	2	0	2	2	0	2	0	0	0	0	0	0





## INFANT & NEONATAL DEATHS



## SECTION D

### INFANT AND NEONATAL DEATHS

The total number of resident infant deaths (deaths of children less than 1 year of age) decreased by 2.5% in Massachusetts from 407 in 2001 to 397 in 2002. The rate of infant deaths also decreased from 5.0 infant deaths per 1,000 live births in 2001 to 4.9 infant deaths per 1,000 live births in 2002. As with live births and other deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths of infants under 28 days of age) decreased from 308 in 2001 to 299 in 2002, a decrease of 2.9%. The rate of neonatal deaths also decreased, from 3.8 in 2001 to 3.7 in 2002.

#### INFANT DEATHS BY RACE

Beginning with the publication of 1989 data, several changes occurred in the method of calculating infant mortality rates (IMRs) by race and ethnicity. These changes affect only the calculation of race/ethnic infant mortality rates; all other data presented in this publication are comparable to information from previous years. These changes are the result of new federal recommendations for analyzing birth information, including infant mortality data, and the implementation of the new Massachusetts Standard Certificate of Death in 1989.

Infants born to Black, non-Hispanic mothers continue to have the highest infant mortality rates (IMRs). The IMR for Black, non-Hispanics in 2002 was 11.6 per 1,000 live births. This represents a decrease of 0.5 (4.1%) from the 2001 rate, but it is over double the IMR for White, non-Hispanic infants.

In 2002, the IMR for Hispanic decreased to 7.0 per 1,000 live births from 7.3 in 2001 (4.1%). The mortality experience of infants born to Hispanic mothers is more similar to the experience of infants born to White, non-Hispanic mothers than to Black, non-Hispanic mothers. The 2002 IMR of 7.3 for Hispanic infants is 43.8% higher than the White, non-Hispanic rate (4.1) and 37.1% below the Black, non-Hispanic rate.

Asian mothers had the lowest rates of infant mortality compared to the other race/ethnicity groups. This is consistent with prior years with the exception of 1995 and 2000 when the rate rose above that of White, non-Hispanics. In 2002, the Asian IMR was 3.0 deaths per 1,000 live births. However, caution should be used when interpreting this rate since it is based on a small number (16) of deaths.

#### INFANT DEATHS BY CAUSE

“Certain conditions originating in the perinatal period” (medical conditions arising from approximately 28 weeks gestation to 28 days of age) was the leading cause of death for White non-Hispanic, Black non-Hispanic, Asian non-Hispanic and Hispanic infants. Congenital anomalies represented the second leading cause of death among white and Hispanic infants, whereas “All Other Causes” was the second for Black non-Hispanic and Asian non-Hispanic infants. “Symptoms, signs and ill-defined conditions” (primarily sudden infant death syndrome (SIDS)) was the third leading cause of death for Black non-Hispanic infants.

The overall leading causes of infant death were conditions arising in the perinatal period (249 deaths) and congenital anomalies (65 deaths), which underwent a 3.9% decrease and 4.8% increase, respectively, from 2001. Other causes of infant death were: SIDS (33 deaths), "Disorders relating to short gestation and unspecified low birthweight" (83 deaths), "Other respiratory conditions of newborn (19 deaths), and homicide (2 deaths). There were 9 more deaths from SIDS in 2002 than there were in 2001, representing a 37.5% increase. The number of homicide deaths (2) has remained below 5 since 1994.

SIDS remains the leading cause of death in the post-neonatal period (28-364 days), while "disorders relating to short gestation and low birthweight" was the leading cause in the neonatal period.

## **NEONATAL AND POST NEONATAL MORTALITY RATES**

The neonatal mortality rate, infants less than 28 days old, was 3.7 deaths per 1,000 live births in 2002. Among White non-Hispanic mothers, the neonatal mortality rate remained fairly constant at 3.2 between 2001 and 2002. During this same time period, the rate decreased by 7.4% among Black non-Hispanic mothers (from 9.5 in 2001 to 8.2 in 2002) and remained relatively constant among Hispanic mothers (from 5.2 in 2001 to 5.2 in 2002). Among Asians, the number of neonatal deaths rose from 10 in 2001 to 12 in 2002, with the rate going from 2.1 to 2.4. These rates should be interpreted cautiously since they are based on very few deaths.

The overall post-neonatal mortality rate, representing the number of deaths of infants between 28 and 364 days of age per 1,000 live births, was relatively constant between 2001 and 2002 at 1.2. The post-neonatal mortality rate among infants of White non-Hispanic mothers was the same in 2002 as in 2001 at 0.9 deaths per 1,000 live births. The most marked change was among infants of Black non-Hispanic mothers, where the post-neonatal mortality rate rose between 2001 and 2002, from 2.6 in 2001 to 3.4 deaths per 1,000 births in 2002; a 30.8% increase.

There was a decrease in the rate of post-neonatal deaths among Hispanics, from 2.1 to 1.8, corresponding to a rate decrease of 14.3%. The number of post-neonatal deaths among Asian decreased by 2, changing from 5 in 2001 to 3 in 2002.

## **DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:**

### **INFANT DEATH**

Death of a child whose age is less than one year (365 days).

### **NEONATAL DEATH**

Death of a child whose age is less than 28 days.

### **POST-NEONATAL DEATH**

Death of a child whose age is at least 28 days, but less than one year.

**RATES IMPORTANT FOR THIS SECTION INCLUDE:**

INFANT MORTALITY RATE (IMR)	$\frac{\text{\# of Resident Deaths at Less than 1 Year of Age} \times 1,000}{\text{Total Resident Live Births}}$
NEONATAL MORTALITY RATE (NMR)	$\frac{\text{\# of Resident Deaths at Less than 28 Days of Age} \times 1,000}{\text{Total Resident Live Births}}$
POST-NEONATAL MORTALITY RATE (PNMR)	$\frac{\text{\# of Resident Deaths at Least 28 Days Old but <365 Days Old} \times 1,000}{\text{Total Resident Live Births}}$

Figure D-1. Infant Mortality Rates by Race<sup>1</sup>, Massachusetts: 1980-2002

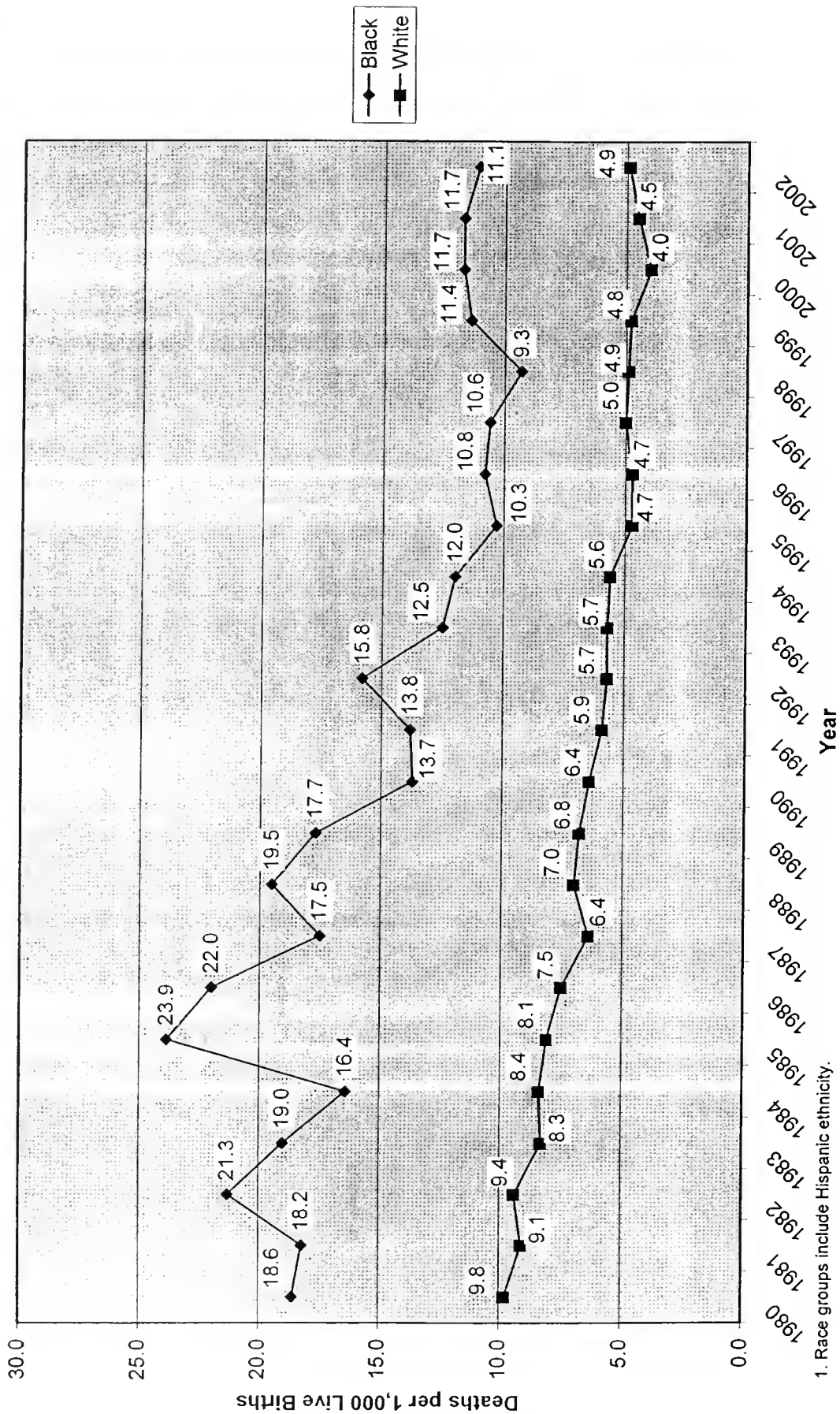
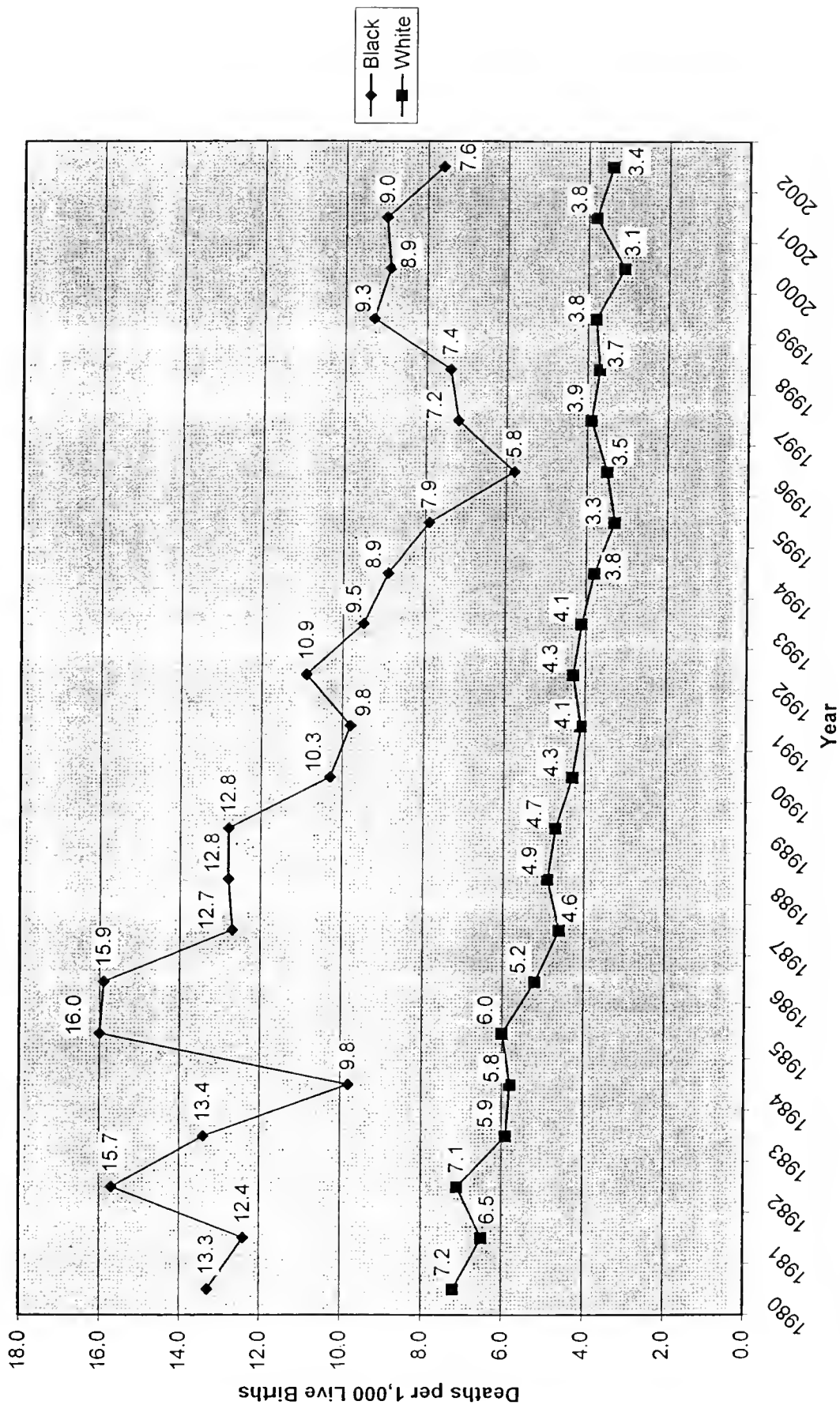


Figure D-2. Neonatal Mortality Rates by Race, Massachusetts: 1980-2002



1. Race groups include Hispanic ethnicity.

**Table D-1. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race and Hispanic Ethnicity, Massachusetts: 1992-2002**

INFANT MORTALITY (less than one year of age)												
State Total <sup>1</sup>			White non-Hispanic		Black non-Hispanic		Hispanic		Asian non-Hispanic		Other <sup>2</sup>	
Year	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1992	569	6.5	371	5.5	110	16.4	67	7.9	16	4.9	5	5.1
1993	523	6.2	346	5.3	84	13.1	77	9.3	13	3.9	3	— <sup>4</sup>
1994	499	6.0	343	5.3	79	12.6	64	7.6	8	2.4	5	5.3
1995	419	5.1	275	4.4	65	11.1	58	7.2	19	5.5	2	— <sup>4</sup>
1996	403	5.0	289	4.7	63	11.4	40	5.1	8	2.2	2	— <sup>4</sup>
1997	425	5.3	294	4.8	64	11.7	55	6.7	10	2.6	2	— <sup>4</sup>
1998	414	5.1	287	4.6	59	10.6	58	6.7	10	2.7	0	0.0
1999	418	5.2	285	4.7	72	12.3	49	5.5	8	1.9	4	— <sup>4</sup>
2000	377	4.6	232	3.8	74	12.8	48	5.2	19	4.1	4	— <sup>4</sup>
2001	407	5.0	245	4.1	71	12.1	69	7.3	15	3.1	7	4.1
2002	397	4.9	239	4.1	69	11.6	67	7.0	16	3.0	6	3.8

NEONATAL MORTALITY (birth to 27 days)												
State Total <sup>1</sup>			White non-Hispanic		Black non-Hispanic		Hispanic		Asian non-Hispanic		Other <sup>2</sup>	
Year	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1992	415	4.8	274	4.0	76	11.4	51	6.0	10	3.0	4	— <sup>4</sup>
1993	375	4.4	245	3.7	64	10.0	55	6.7	9	2.7	2	— <sup>4</sup>
1994	349	4.2	240	3.7	58	9.3	40	4.7	7	2.1	4	— <sup>4</sup>
1995	298	3.6	198	3.1	50	8.5	39	4.8	10	2.9	1	— <sup>4</sup>
1996	290	3.6	222	3.6	34	6.2	27	3.5	5	1.4	1	— <sup>4</sup>
1997	323	4.0	228	3.7	44	8.0	43	5.2	7	1.8	1	— <sup>4</sup>
1998	315	3.9	218	3.5	47	8.5	43	5.0	7	1.9	0	0.0
1999	332	4.1	226	3.7	58	9.9	39	4.4	5	1.2	4	— <sup>4</sup>
2000	288	3.5	177	2.9	57	9.9	37	4.0	14	3.0	3	— <sup>4</sup>
2001	308	3.8	190	3.2	56	9.5	49	5.2	10	2.1	3	— <sup>4</sup>
2002	299	3.7	185	3.2	49	8.2	50	5.2	13	2.4	2	— <sup>4</sup>

POST NEONATAL MORTALITY (28-365 days)												
State Total <sup>1</sup>			White non-Hispanic		Black Non-Hispanic		Hispanic		Asian non-Hispanic		Other <sup>2</sup>	
Year	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>	#	Rate <sup>3</sup>
1992	154	1.8	97	1.4	34	5.1	16	1.9	6	1.8	1	— <sup>4</sup>
1993	148	1.7	101	1.5	20	3.1	22	2.7	4	— <sup>4</sup>	1	— <sup>4</sup>
1994	150	1.8	103	1.6	21	3.3	24	2.8	1	— <sup>4</sup>	1	— <sup>4</sup>
1995	121	1.5	77	1.2	15	2.6	19	2.3	9	2.6	1	— <sup>4</sup>
1996	113	1.4	67	1.1	29	5.3	13	1.7	3	— <sup>4</sup>	1	— <sup>4</sup>
1997	102	1.3	66	1.1	20	3.7	12	1.5	3	— <sup>4</sup>	1	— <sup>4</sup>
1998	99	1.2	69	1.1	12	2.2	15	1.7	3	— <sup>4</sup>	0	0.0
1999	86	1.1	59	1.0	14	2.4	10	1.1	3	— <sup>4</sup>	0	0.0
2000	89	1.1	55	0.9	17	2.9	11	1.2	5	1.1	1	— <sup>4</sup>
2001	99	1.2	55	0.9	15	2.6	20	2.1	5	1.0	4	2.4
2002	98	1.2	54	0.9	20	3.4	17	1.8	3	— <sup>4</sup>	4	— <sup>4</sup>

1. Deaths of infants of unknown race are included in the total calculation. For rate computations, births of infants of unknown race are allocated into the race categories according to the distribution of births of known race. 2. Other: American Indian and Other races. 3. Rates are expressed per 1,000 live births. 4. Calculations based on fewer than five events are excluded



**Table D-2. Trends in Infant, Neonatal, and Post-Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2002**

<b>INFANT MORTALITY (less than one year of age)</b>								
<b>Year</b>	<b>State Total<sup>2</sup></b>		<b>White</b>		<b>Black</b>		<b>Asian/Other<sup>3</sup></b>	
	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate</b>
1980	748	10.3	655	9.8	87	18.6	5	4.6
1981	710	9.6	616	9.1	85	18.2	8	6.1
1982	764	10.1	656	9.4	102	21.3	5	3.3
1983	682	9.0	579	8.3	89	19.0	12	7.4
1984	699	8.9	601	8.4	82	16.4	13	7.5
1985	745	9.1	608	8.1	126	23.8	11	6.1
1986	695	8.4	560	7.5	123	22.0	11	4.6
1987	608	7.2	486	6.4	110	17.5	12	4.5
1988	693	7.9	546	7.0	133	19.5	13	3.8
1989	697	7.6	549	6.8	131	17.7	17	4.8
1990	649	7.0	519	6.4	106	13.7	24	6.5
1991	577	6.5	461	6.0	102	13.8	14	3.9
1992	569	6.5	438	5.7	114	15.8	17	4.7
1993	523	6.2	423	5.7	87	12.5	13	3.5
1994	499	6.0	407	5.6	81	12.0	11	2.9
1995	419	5.1	333	4.7	65	10.3	21	5.5
1996	403	5.0	329	4.7	65	10.8	8	2.0
1997	425	5.3	349	5.0	66	10.6	10	2.4
1998	414	5.1	345	4.9	59	9.3	10	2.3
1999	418	5.2	334	4.8	75	11.4	9	1.9
2000	377	4.6	280	4.0	76	11.7	19	3.6
2001	407	5.0	314	4.5	77	11.7	16	3.0
2002	397	4.9	306	4.5	74	11.1	17	2.9

**Table D-2 (cont'd). Trends in Infant, Neonatal, and Post-Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2002**

NEONATAL MORTALITY (birth to 27 days)								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>
1980	550	7.6	483	7.2	62	13.3	5	4.6
1981	510	6.9	442	6.5	59	12.4	5	3.8
1982	573	7.6	494	7.1	75	15.7	3	— <sup>5</sup>
1983	482	6.3	411	5.9	63	13.4	7	4.3
1984	472	6.0	411	5.8	49	9.8	8	4.6
1985	538	6.6	447	6.0	85	16.0	5	2.8
1986	478	5.8	383	5.2	89	15.9	5	2.1
1987	432	5.1	343	4.6	80	12.7	9	3.4
1988	477	5.4	383	4.9	87	12.8	6	1.8
1989	479	5.2	376	4.7	95	12.8	8	2.3
1990	446	4.8	347	4.3	80	10.3	9	5.1
1991	401	4.5	319	4.1	72	9.8	10	2.8
1992	415	4.8	325	4.3	79	10.9	11	3.1
1993	375	4.4	300	4.1	66	9.5	9	2.4
1994	349	4.2	280	3.8	60	8.9	9	2.4
1995	298	3.6	237	3.3	50	7.9	11	2.9
1996	290	3.6	249	3.5	35	5.8	5	1.2
1997	323	4.0	271	3.9	45	7.2	7	1.7
1998	315	3.9	261	3.7	47	7.4	7	1.6
1999	332	4.1	265	3.8	61	9.3	6	1.3
2000	288	3.5	214	3.1	58	8.9	14	2.7
2001	308	3.8	239	3.5	59	9.0	10	1.9
2002	299	3.7	235	3.4	51	7.6	13	2.2

**Table D-2 (cont'd). Trends in Infant, Neonatal, and Post-Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2002**

POST-NEONATAL MORTALITY (28-364 days)								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>
1980	198	2.7	172	2.6	25	5.3	0	0.0
1981	200	2.7	174	2.6	26	5.8	3	-- <sup>5</sup>
1982	191	2.5	162	2.3	27	5.6	2	-- <sup>5</sup>
1983	200	2.7	168	2.4	26	5.6	5	3.1
1984	227	2.9	190	2.6	33	6.6	5	2.9
1985	207	2.5	161	2.1	41	7.8	6	3.3
1986	217	2.6	177	2.3	34	6.1	6	2.5
1987	176	2.1	143	1.8	30	4.8	3	-- <sup>5</sup>
1988	216	2.5	163	2.1	46	6.7	7	2.0
1989	218	2.4	173	2.1	36	4.9	9	2.5
1990	203	2.2	172	2.1	26	3.4	5	1.4
1991	176	2.0	142	1.8	30	4.1	4	-- <sup>5</sup>
1992	154	1.8	113	1.5	35	4.8	6	1.7
1993	148	1.7	123	1.7	21	3.0	4	-- <sup>5</sup>
1994	150	1.8	127	1.7	21	3.1	2	-- <sup>5</sup>
1995	121	1.5	96	1.3	15	2.4	10	2.6
1996	113	1.4	80	1.1	30	5.0	3	-- <sup>5</sup>
1997	102	1.3	78	1.1	21	3.4	3	-- <sup>5</sup>
1998	99	1.2	84	1.2	12	1.9	3	-- <sup>5</sup>
1999	86	1.1	69	1.0	14	2.1	3	-- <sup>5</sup>
2000	89	1.1	66	0.9	18	2.8	5	1.0
2001	99	1.2	75	1.1	18	2.7	6	1.1
2002	98	1.2	71	1.0	23	3.4	4	-- <sup>5</sup>

1. Hispanic origin could not be identified from the Massachusetts death certificate before 1989; thus, Hispanic trend data are not available. Most Hispanics are included in the race category of white. Hispanic infant mortality data for the years 1990 through 2002 are presented in Table 12B. 2. Deaths of infants of unknown race are included in the total calculation. For rate computations, infants of unknown race are allocated into the race categories according to the distribution of births of known race. 3. Other: American Indian and Other races. 4. Rates are expressed per 1,000 live births. 5. Calculations based on fewer than five events are excluded.

Table D-3. Infant, Neonatal, and Post Neonatal Deaths by Cause, Massachusetts: 2002

Cause of Death <sup>1</sup>	Infant (<1 year)			Neonatal (<28 days)			Post Neonatal (28-365 days)		
	#	%2	ICD-10 Code	#	%2	#	%2	#	%2
<b>TOTAL</b>	<b>397</b>	<b>100%</b>		<b>299</b>	<b>100%</b>	<b>98</b>	<b>100%</b>		
Infectious and parasitic diseases									
Cancer	6	1.5	A00-B99	0	0.0	6	6.1		
Diseases of the blood and blood forming organs (anemia)	0	0.0	C00-C97	0	0.0	0	0.0		
Diseases of nervous system and ear	1	-- <sup>3</sup>	D50-D89	0	0.0	1	-- <sup>3</sup>		
Diseases of the respiratory system	8	2.0	G00-G98, H60-H93	2	-- <sup>3</sup>	6	6.1		
Diseases of digestive system	10	2.5	J00-J98	0	0.0	10	10.2		
Diseases of digestive system	3	-- <sup>3</sup>	K00-K92	0	0.0	3	-- <sup>3</sup>		
<b>Congenital malformations</b>	<b>65</b>	<b>16.4</b>	<b>Q00-Q99</b>	<b>46</b>	<b>15.4</b>	<b>19</b>	<b>19.4</b>		
Congenital malformations of nervous system	8	2.0	Q00-Q07	6	2.0	2	-- <sup>3</sup>		
Anencephalus and similar malformations	2	-- <sup>3</sup>	Q00	2	-- <sup>3</sup>	0	0.0		
Congenital malformations of eye, ear, face, and neck	0	0.0	Q10-Q18	0	0.0	0	0.0		
Congenital malformations of heart	13	3.3	Q20-Q24	8	2.7	5	5.1		
Other congenital malformations of circulatory system	2	-- <sup>3</sup>	Q25-Q28	1	-- <sup>3</sup>	1	-- <sup>3</sup>		
Congenital malformations of respiratory system	14	3.5	Q30-Q34	14	4.7	0	0.0		
Cleft palate and other digestive tract malformations	1	-- <sup>3</sup>	Q35-Q45	0	0.0	1	-- <sup>3</sup>		
Congenital malformations of genitourinary system	2	-- <sup>3</sup>	Q50-Q64	2	-- <sup>3</sup>	0	0.0		
Congenital malformations of musculoskeletal system	5	1.3	Q65-Q85	3	-- <sup>3</sup>	2	-- <sup>3</sup>		
Chromosomal abnormalities	15	3.8	Q90-Q99	9	3.0	6	6.1		
<b>Certain conditions originating in the perinatal period</b>	<b>249</b>	<b>62.7</b>	<b>P00-P96</b>	<b>242</b>	<b>80.9</b>	<b>7</b>	<b>7.1</b>		
Newborn affected by maternal conditions which may be unrelated to present pregnancy	1	-- <sup>3</sup>	P00	1	-- <sup>3</sup>	0	0.0		
Newborn affected by maternal complications of pregnancy	30	7.6	P01	30	10.0	0	0.0		
Newborn affected by complications of placenta, cord and membrane	20	5.0	P02	20	6.7	0	0.0		
Newborn affected by other complications of labor and delivery	1	-- <sup>3</sup>	P03	1	-- <sup>3</sup>	0	0.0		
Disorders relating to short gestation and low birthweight	83	20.9	P07	82	27.4	1	-- <sup>3</sup>		
Birth trauma	7	1.8	P10-P15	7	2.3	0	0.0		
Intrauterine hypoxia and birth asphyxia	13	3.3	P20-P21	13	4.3	0	0.0		
Respiratory distress of newborn	21	5.3	P22	21	7.0	0	0.0		
Other respiratory conditions of newborn	19	4.8	P23-P28	18	6.0	1	-- <sup>3</sup>		
Infections specific to the perinatal period	14	3.5	P35-P39	10	3.3	4	-- <sup>3</sup>		
Neonatal hemorrhage	1	-- <sup>3</sup>	P50-P52, P54	1	-- <sup>3</sup>	0	0.0		
Other and ill-defined conditions originating in the perinatal period	3	-- <sup>3</sup>	P90-P96	3	-- <sup>3</sup>	0	0.0		
<b>Symptoms, signs, and ill-defined conditions</b>	<b>33</b>	<b>8.3</b>	<b>R00-R99</b>	<b>3</b>	<b>--<sup>3</sup></b>	<b>30</b>	<b>30.6</b>		
Sudden Infant Death Syndrome (SIDS)	17	4.3	R95	1	-- <sup>3</sup>	16	16.3		
Unintentional Injuries	4	-- <sup>3</sup>	V01-X59	1	-- <sup>3</sup>	3	-- <sup>3</sup>		
Homicide	2	-- <sup>3</sup>	X85-Y09	0	0.0	2	-- <sup>3</sup>		
<b>All other causes</b>	<b>16</b>	<b>4.0</b>	<b>Residual</b>	<b>6</b>	<b>1.7</b>	<b>11</b>	<b>11.2</b>		

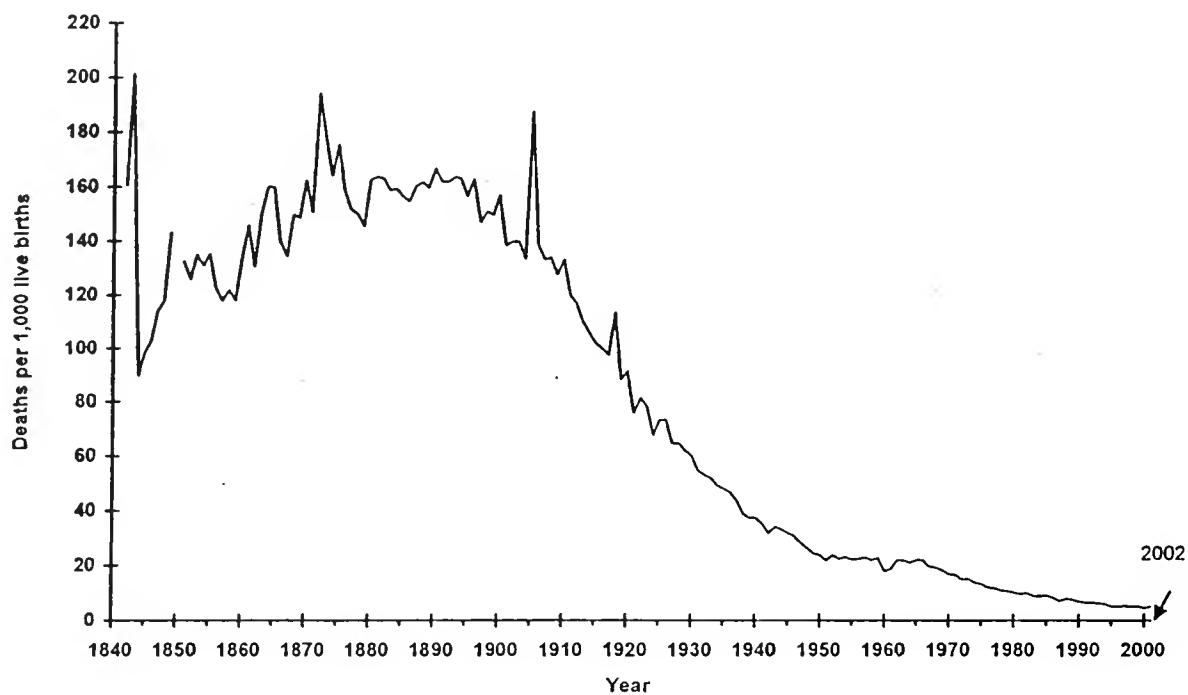
1. Please refer to the page 130 for an explanation of ICD-10 codes. 2. Percents not calculated for subcategories. 3. Calculations based on fewer than five events are excluded.

Table D-4. Infant Deaths by Major Causes, Race and Hispanic Ethnicity, Massachusetts: 2002

Cause of Death <sup>2</sup>	ICD-10 Code	White non-Hispanic <sup>1</sup>		Black non-Hispanic <sup>1</sup>		Asian non-Hispanic <sup>1</sup>		Hispanic	
		#	%	#	%	#	%	#	%
<b>TOTAL</b>		239	100%	69	100%	16	100%	67	100%
Congenital malformations	Q00-Q99	41	17.2	7	10.1	1	-- <sup>3</sup>	14	20.9
Certain conditions originating in the perinatal period	P00-P96	153	64.0	42	60.9	11	68.8	42	62.7
Symptoms, signs, and ill-defined conditions	R00-R99	17	7.1	8	11.6	1	-- <sup>3</sup>	6	9.0
Unintentional Injuries	V01-X59	2	-- <sup>3</sup>	1	-- <sup>3</sup>	0	0.0	1	-- <sup>3</sup>
Homicide	X85-Y09	1	-- <sup>3</sup>	0	0.0	0	0.0	1	-- <sup>3</sup>
All other causes	Residual	25	10.5	11	15.9	3	-- <sup>3</sup>	3	-- <sup>3</sup>

1. Race and ethnicity data in this table are presented as mutually exclusive categories and Cape Verdeans are not included with Blacks. Persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please refer to Appendix for comparability ratios. 3. Calculations based on fewer than five events are excluded.

Figure D-3. Infant Mortality Rates, Massachusetts: 1842-2002



1. Data not available for 1850.

## **MARRIAGES & DIVORCES**





## SECTION E

### MARRIAGES AND DIVORCES

Marriages and divorces are reported by place of occurrence in Massachusetts. For example, if two Boston residents are married in Barnstable, this marriage will be reported by place of occurrence (Barnstable) rather than the residence of the couple (Boston). Marriages have traditionally been reported in this manner because of the number of couples who live in different communities from the town of marriage. Additionally, out-of-state residents who marry in Massachusetts are included in these data.

Marriages and divorces which involve Massachusetts residents, but occur in other states, are not included in these figures. No system of interstate exchange exists for these events. Unlike some states, Massachusetts marriage and divorce laws neither encourage out-of-state residents to come to the state nor discourage residents from using the Massachusetts system by imposing long waiting periods, etc.

In 2002, 37,735 marriages occurred in Massachusetts compared to 40,048 in 2001, a decrease of 5.8%. The rate of marriages was at 6.3 per 1,000 population in 2001 and 5.9 in 2002. The 2002 US rate of marriages per 1,000 population was 7.8, lower than the 2001 US rate of 8.2. Of all brides in Massachusetts in 2002, 73.9% had not previously been married. This percentage was slightly lower among the grooms--72.5%.

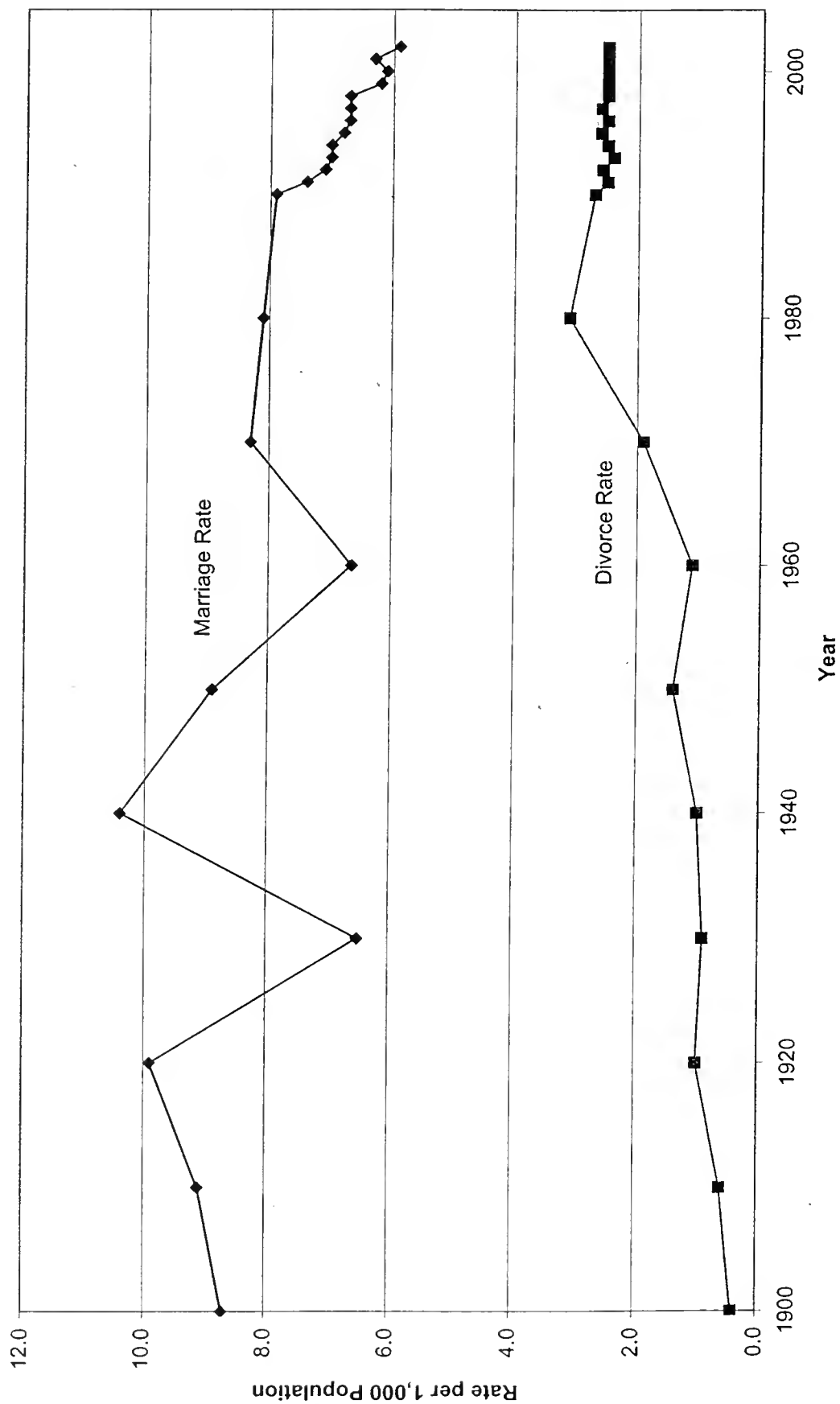
In 2002, 16,253 divorces were granted in Massachusetts, an increase 6.1% from the 15,324 divorces granted in 2001. The 2002 rate of divorce per 1,000 population in Massachusetts was 2.5, slightly higher than the 2001 divorce rate of 2.4. This rate was well below the 2002 US rate of 3.8 divorces per 1,000 population.

#### RATES IMPORTANT FOR THIS SECTION INCLUDE:

MARRIAGE RATE	$\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1,000$
---------------	--

DIVORCE RATE	$\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1,000$
--------------	---

Figure E-1. Rates of Marriages and Divorces per 1,000 Population, Selected Years  
Massachusetts: 1900-2002



**Table E-1. Marriages and Divorces by County**

**Massachusetts Occurrence: 2002**

	<u><b>Marriages</b></u>	<u><b>Divorces</b></u>
State Total	37,735	16,253
<u><b>Counties</b></u>		
Barnstable	2,488	528
Bershire	967	341
Bristol	2,915	1,542
Dukes	428	55
Essex	4,295	1,982
Franklin	386	275
Hampden	2,529	1,216
Hampshire	758	374
Middlesex	7,700	2,911
Nantucket	323	36
Norfolk	3,281	1,485
Plymouth	2,660	1,382
Suffolk	4,475	1,510
Worcester	4,530	2,616

**Table E-2. Marriages and Divorces and Rates per 1,000 Population**

**Massachusetts Occurrence, Selected Years: 1900-2002**

Year	<u>Marriages</u>		<u>Divorces</u>	
	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9
1988	49,941	8.5	17,676	3.0
1989	49,174	8.4	16,819	2.9
1990	47,786	7.9	16,258	2.7
1991	44,621	7.4	14,987	2.5
1992	43,228	7.1	15,411	2.5
1993	42,355	7.0	14,435	2.4
1994	42,503	7.0	15,450	2.5
1995	41,522	6.8	15,772	2.6
1996	41,234	6.7	15,485	2.5
1997	41,528	6.7	15,942	2.6
1998	38,722	6.2	16,010	2.6
1999	39,425	6.2	15,632	2.5
2000	38,603	6.1	15,980	2.5
2001	40,048	6.3	15,324	2.4
2002	37,735	5.9	16,253	2.5

**Table E-3. Marriages by Age and Marital Status**

**Massachusetts Occurrence: 2002**

<u>Bride</u>								
Age	Total Number	%	Single Number	%	Widowed Number	%	Divorced Number	%
Total	37,734	100.0%	27,895	73.9%	808	2.1%	9,031	23.9%
<20	965	100.0%	962	99.7%	0	0.0%	3	0.3%
20-29	17,814	100.0%	16,908	94.9%	12	0.1%	894	5.0%
30-39	12,203	100.0%	8,353	68.5%	112	0.9%	3,738	30.6%
40-49	4,584	100.0%	1,387	30.3%	227	5.0%	2,970	64.8%
50-59	1,613	100.0%	246	15.3%	187	11.6%	1,180	73.2%
60-69	407	100.0%	30	7.4%	168	41.3%	209	51.4%
70+	148	100.0%	9	6.1%	102	68.9%	37	25.0%
<u>Groom</u>								
Age	Total Number	%	Single Number	%	Widowed Number	%	Divorced Number	%
Total	37,734	100.0%	27,356	72.5%	779	2.1%	9,599	25.4%
<20	318	100.0%	318	100.0%	0	0.0%	0	0.0%
20-29	14,422	100.0%	13,932	96.6%	5	0.0%	485	3.4%
30-39	14,224	100.0%	10,823	76.1%	50	0.4%	3,351	23.6%
40-49	5,448	100.0%	1,933	35.5%	126	2.3%	3,389	62.2%
50-59	2,259	100.0%	293	13.0%	172	7.6%	1,794	79.4%
60-69	695	100.0%	46	6.6%	169	24.3%	480	69.1%
70+	368	100.0%	11	3.0%	257	69.8%	100	27.2%

1 missing value for bride and groom.

Table E-4. Number of Marriages by Age of Bride and Age of Groom								
Massachusetts Occurrence: 2002								
Age of Bride	Age of Groom							
	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	37,734	318	14,422	14,224	5,448	2,259	695	368
<20	965	164	708	81	12	0	0	0
20-29	17,814	144	11,777	5,381	462	42	7	1
30-39	12,203	7	1,794	7,661	2,356	340	42	3
40-49	4,584	2	134	1,022	2,238	1,016	147	25
50-59	1,613	1	8	75	362	787	308	72
60-69	407	0	1	3	17	70	180	136
70+	148	0	0	1	1	4	11	131

1 value missing.

Table E-5. Number of Marriages for Bride by Number of Marriages for Groom						
Massachusetts Occurrence: 2002						
Bride	Number of Marriages Groom					
	Total	1	2	3	4	5+
Total	37,735	27,360	8,613	1,556	181	25
1	27,898	23,530	3,859	462	39	8
2	8,238	3,406	3,956	769	93	14
3	1,407	382	705	283	35	2
4	166	41	81	33	11	0
5+	26	1	12	9	3	1

## POPULATION





## **SECTION F**

### **POPULATION**

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality and county. They are based primarily on the US Federal Census for 2000.

All additional interpolations and calculations have been provided by Bruce B. Cohen and James West, Division of Research and Epidemiology, Bureau for Health Information, Statistics, Research and Evaluation, Massachusetts Department of Public Health.

In 2002, there were an estimated 6,429,761 residents of Massachusetts. This represents an 8.4% increase in population since 1987, when the population numbered 5,932,611. Among the total 2002 population in Massachusetts, 48.3% were male, 25.8% were below the age of 20, and 7.0% were over 75 years of age.

Figure F-1. Population, Massachusetts: 1900-2002

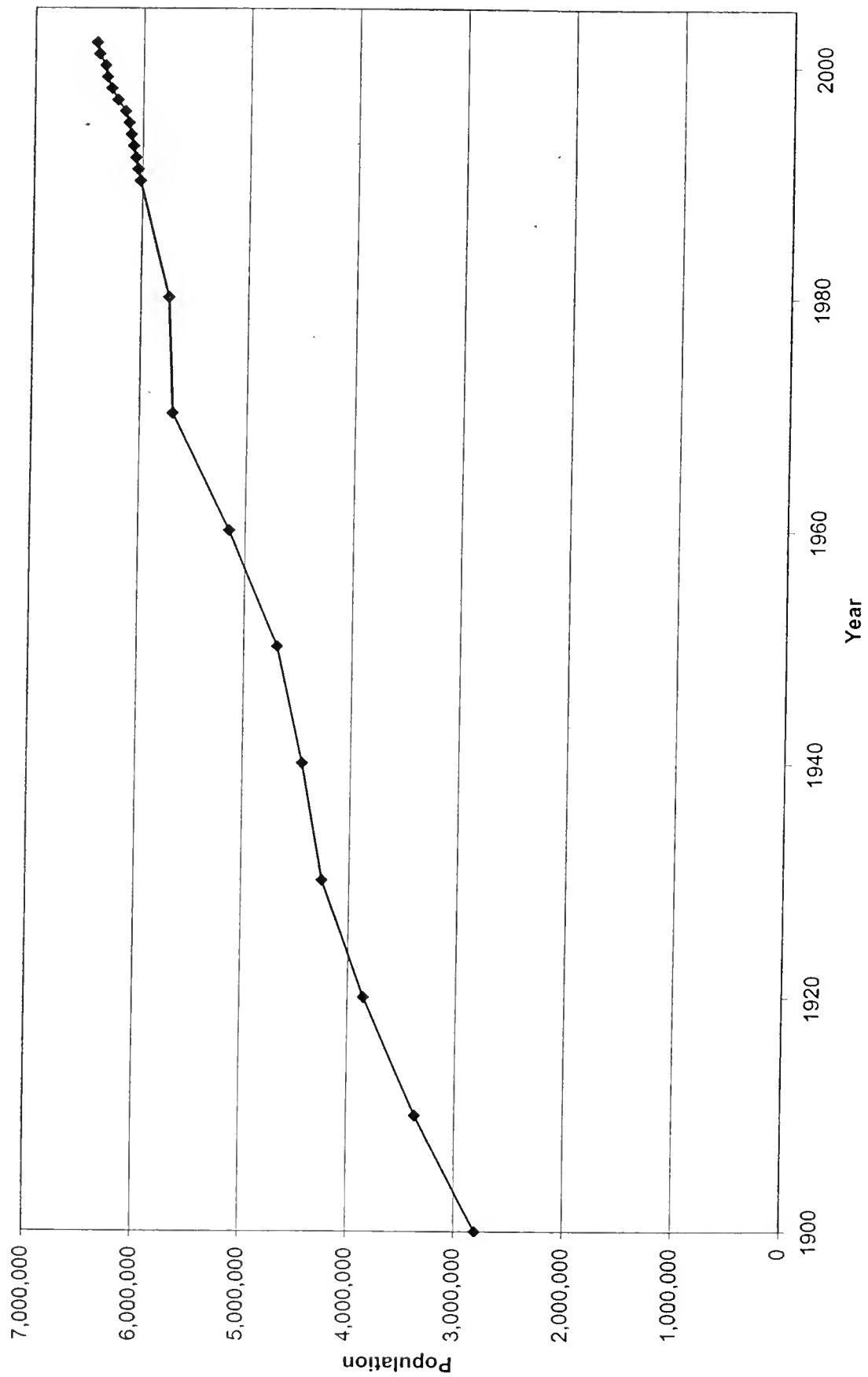


Table F-1. Population Estimates<sup>1</sup> by Race<sup>2</sup>, Hispanic Ethnicity<sup>3</sup>, Age, and Sex, Massachusetts: 2002

Age	Sex	Total	White	Black	Hispanic	Asian	Amer. Indian
			non-Hispanic	non-Hispanic		non-Hispanic	non-Hispanic
0-4	Male	201,751	149,934	16,081	24,837	10,505	394
	Female	193,059	143,131	15,437	23,828	10,272	391
	Total	394,810	293,065	31,518	48,665	20,777	785
5-9	Male	209,582	159,868	16,247	23,407	9,526	534
	Female	199,136	150,919	15,416	22,387	9,891	523
	Total	408,718	310,787	31,663	45,794	19,417	1,057
10-14	Male	223,771	172,322	17,696	23,652	9,473	628
	Female	212,869	163,621	17,177	22,540	8,925	606
	Total	436,640	335,943	34,873	46,192	18,398	1,234
15-19	Male	210,256	163,954	15,496	20,340	9,865	601
	Female	199,432	155,352	14,651	18,607	10,256	566
	Total	409,688	319,306	30,147	38,947	20,121	1,167
20-24	Male	213,925	158,700	15,643	25,152	13,821	609
	Female	218,924	162,615	16,272	24,122	15,276	639
	Total	432,849	321,315	31,915	49,274	29,097	1,248
25-29	Male	204,894	151,763	13,450	22,573	16,585	523
	Female	211,115	156,820	14,558	22,029	17,186	522
	Total	416,009	308,583	28,008	44,602	33,771	1,045
30-34	Male	238,470	186,125	14,213	21,250	16,347	535
	Female	246,039	191,785	15,825	21,708	16,174	547
	Total	484,509	377,910	30,038	42,958	32,521	1,082
35-39	Male	260,018	211,731	15,093	19,254	13,328	612
	Female	267,384	217,181	16,344	20,279	12,954	626
	Total	527,402	428,912	31,437	39,533	26,282	1,238
40-44	Male	264,609	223,917	14,265	15,264	10,497	666
	Female	273,342	230,548	15,417	16,372	10,344	661
	Total	537,951	454,465	29,682	31,636	20,841	1,327
45-49	Male	238,190	206,358	11,778	11,213	8,254	587
	Female	250,785	216,233	12,656	12,399	8,871	626
	Total	488,975	422,591	24,434	23,612	17,125	1,213
50-54	Male	208,803	184,192	9,334	8,130	6,642	505
	Female	222,369	194,711	10,508	9,518	7,119	513
	Total	431,172	378,903	19,842	17,648	13,761	1,018
55-59	Male	168,863	151,901	6,589	5,630	4,397	346
	Female	182,612	162,807	8,041	6,809	4,581	374
	Total	351,475	314,708	14,630	12,439	8,978	720

Table F-1. (Continued) Population Estimates<sup>1</sup> by Race<sup>2</sup>, Hispanic Ethnicity<sup>3</sup>, Age, and Sex, Massachusetts: 2002

Age	Sex	Total	White non-Hispanic	Black non-Hispanic	Hispanic	Asian non-Hispanic	Amer. Indian non-Hispanic
60-64	Male	119,505	107,205	4,733	3,838	3,457	272
	Female	133,088	118,426	6,130	4,624	3,670	238
	Total	252,593	225,631	10,863	8,462	7,127	510
65-69	Male	95,834	87,060	3,540	2,418	2,633	183
	Female	112,197	100,996	4,753	3,408	2,878	162
	Total	208,031	188,056	8,293	5,826	5,511	345
70-74	Male	87,724	81,382	2,613	1,691	1,906	132
	Female	114,161	105,351	3,891	2,455	2,299	165
	Total	201,885	186,733	6,504	4,146	4,205	297
75-79	Male	75,232	70,684	1,955	1,158	1,316	119
	Female	109,492	102,820	3,211	1,698	1,646	117
	Total	184,724	173,504	5,166	2,856	2,962	236
80-84	Male	49,486	47,012	1,118	636	671	49
	Female	87,379	82,973	2,202	1,103	987	114
	Total	136,865	129,985	3,320	1,739	1,658	163
85+	Male	35,910	34,002	818	557	491	42
	Female	89,556	85,735	1,909	995	808	109
	Total	125,466	119,737	2,727	1,552	1,299	151
Total	Male	3,106,823	2,548,110	180,662	231,000	139,714	7,337
	Female	3,322,939	2,742,024	194,398	234,881	144,137	7,499
	Total	6,429,761	5,290,134	375,060	465,881	283,851	14,836

1. MDPH 2002 population estimates taken from MassCHIP, values may not sum to totals due to rounding in the algorithm.

2. The age-gender-race distributions from MassCHIP. 3. Persons of Hispanic Ethnicity are NOT included in the race categories. These estimates are used to calculate population based rates in this report.

Figure F-2. Population by Age Group, Massachusetts: 2002

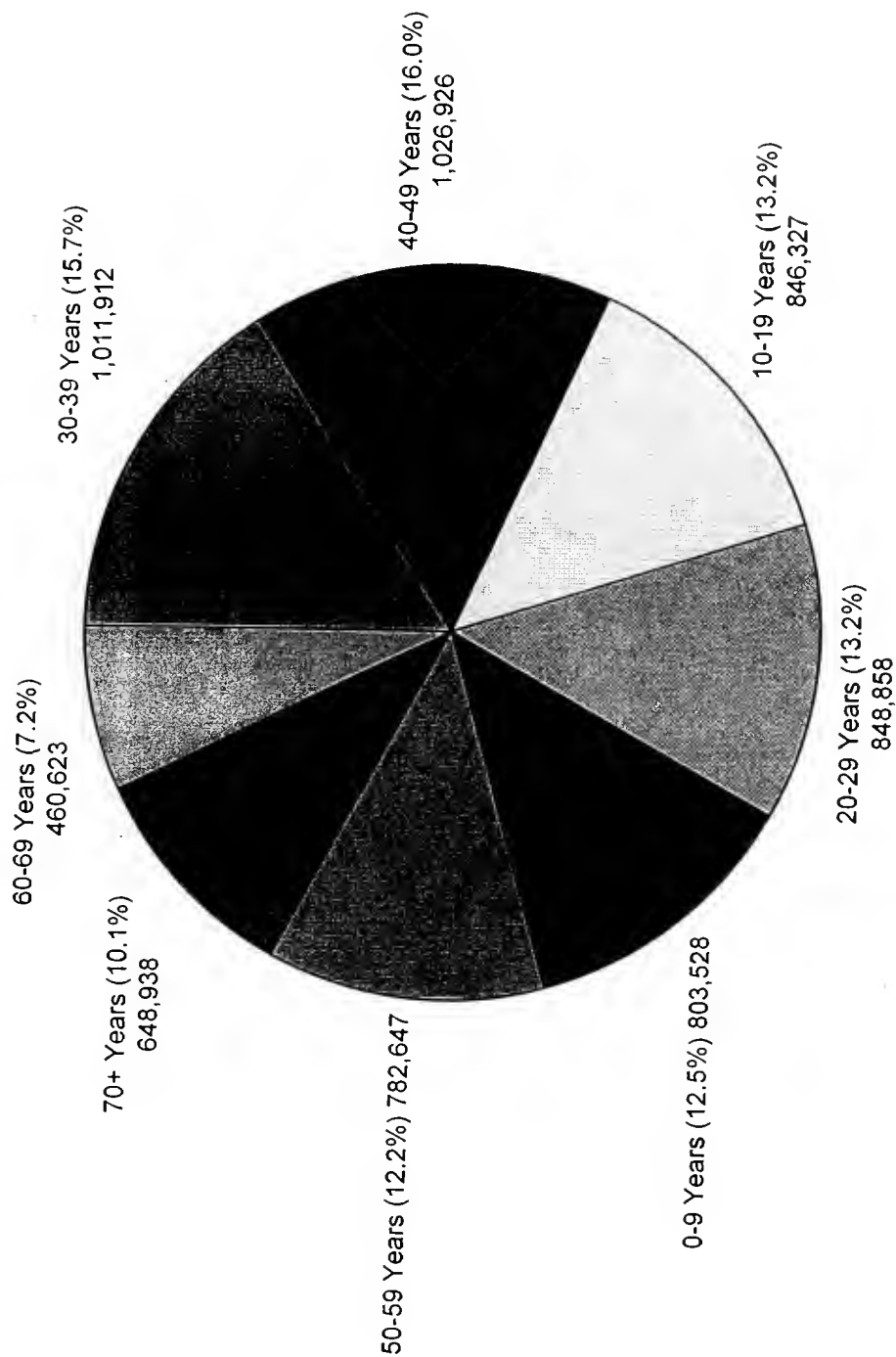


Figure F-3. Population by Race/ Ethnicity, Massachusetts: 2002

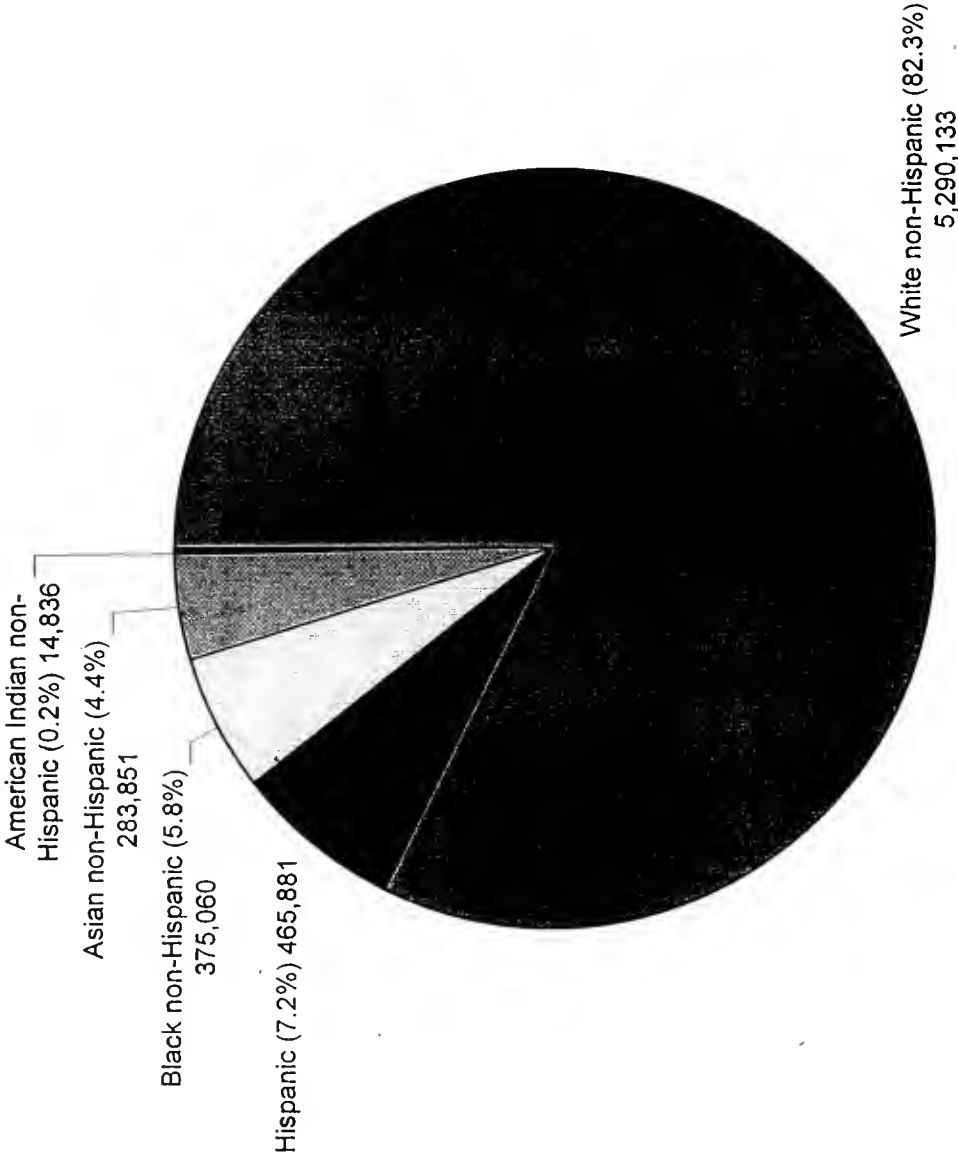
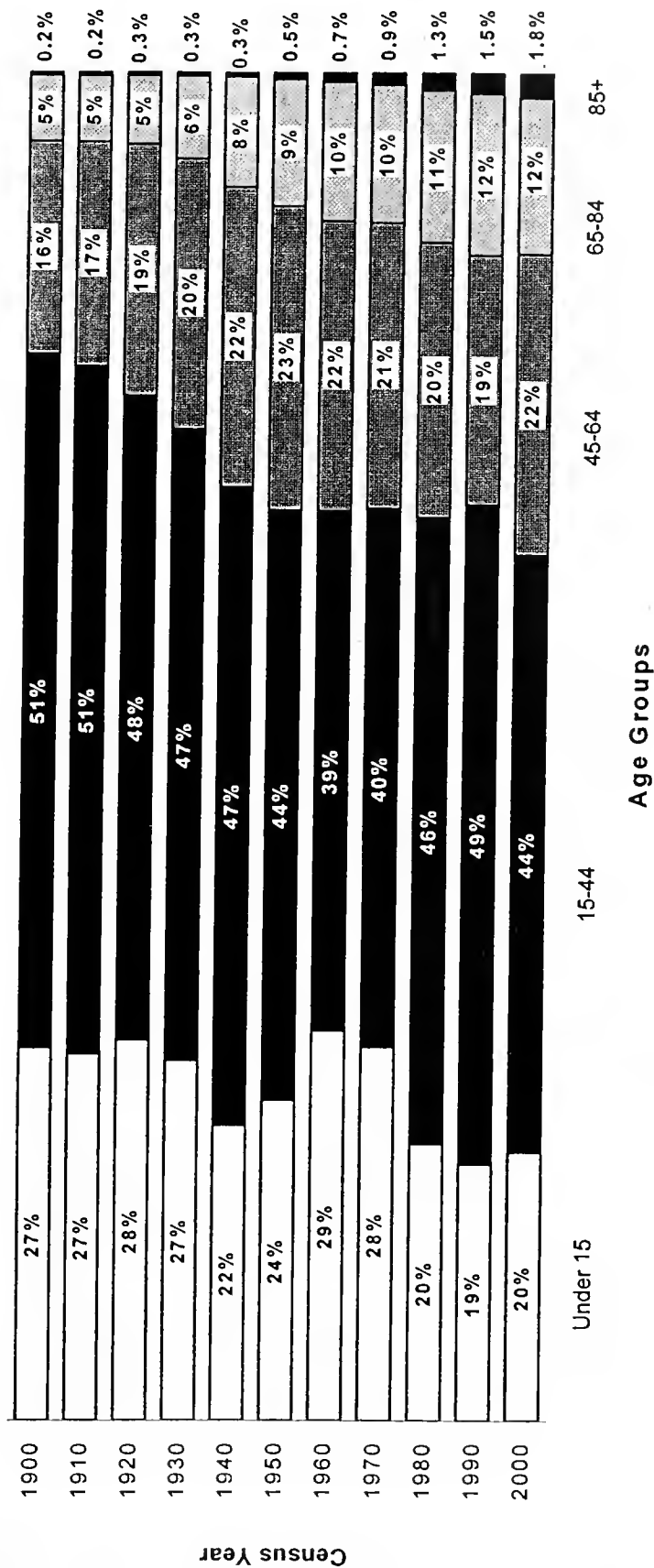


Figure F-4

# Changes in Age Composition of the Population Massachusetts: 1900-2000



Source: US Census Bureau 1900-2000.

Note: Percentages based on counts with known age.

Table F-2. Massachusetts Population by County: 1930-2000								
	1930	1940	1950	1960	1970	1980	1990	2000
State	4,249,614	4,316,721	4,690,514	5,148,578	5,689,170	5,737,037	6,016,425	6,349,097
Counties								
Barnstable	32,305	37,295	46,805	70,286	96,656	147,925	186,605	222,230
Berkshire	120,700	122,273	132,966	142,135	149,402	145,110	139,352	134,953
Bristol	364,590	364,637	381,569	398,488	444,301	474,641	506,325	534,678
Dukes	4,953	5,669	5,633	5,829	6,117	8,942	11,639	14,987
Essex	498,040	496,313	522,384	568,831	637,887	633,632	670,080	723,419
Franklin	49,612	49,453	52,747	54,864	59,210	64,317	70,092	71,535
Hampden	335,496	332,107	367,971	429,353	459,050	443,018	456,310	456,228
Hampshire	72,801	72,461	87,594	103,229	123,981	138,813	146,568	152,251
Middlesex	934,924	971,390	1,064,569	1,238,742	1,397,268	1,367,034	1,398,468	1,465,396
Nantucket	3,678	3,401	3,484	3,559	3,774	5,087	6,012	9,520
Norfolk	299,426	325,180	392,308	510,256	605,051	606,587	616,087	650,308
Plymouth	162,311	168,824	189,468	248,449	333,314	405,437	435,276	472,822
Suffolk	879,536	863,248	896,615	791,329	735,190	650,142	663,906	689,807
Worcester	491,242	504,470	546,401	583,228	637,969	646,352	709,705	750,963

Source: United States Census 1930-2000



**Table F-3. Massachusetts Population by City and Town: 1980, 1990, And 2000 US Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
ABINGTON	13,517	13,817	15,111	CAMBRIDGE	95,322	95,802	98,868
ACTION	17,544	17,872	20,189	CANTON	18,182	18,530	20,530
ACUSHNET	8,704	9,554	10,604	CARLISLE	3,306	4,333	4,634
ADAMS	10,381	9,445	8,829	CARVER	6,988	10,590	11,414
AGAWAM	26,271	27,323	28,845	CHARLEMONT	1,149	1,249	1,325
ALFORD	394	418	417	CHARLTON	6,719	9,576	11,242
AMESBURY	13,971	14,997	16,271	CHATHAM	6,071	6,579	6,728
AMHERST	33,229	35,228	37,891	CHELMSFORD	31,174	32,383	34,524
ANDOVER	26,370	29,151	31,590	CHELSEA	25,431	28,710	31,956
AQUINNAH (GAY HEAD)	220	201	314	CHESHIRE	3,124	3,479	3,657
ARLINGTON	48,219	44,630	42,776	CHESTER	1,123	1,280	1,402
ASHBURNHAM	4,075	5,433	5,948	CHESTERFIELD	1,000	1,048	1,162
ASHBY	2,311	2,717	2,793	CHICOPEE	55,112	56,632	53,873
ASHFIELD	1,458	1,715	1,849	CHILMARK	489	650	818
ASHLAND	9,165	12,066	14,415	CLARKSBURG	1,871	1,745	1,772
ATHOL	10,634	11,451	11,330	CLINTON	12,771	13,222	13,508
ATTLEBORO	34,196	38,383	41,282	COHASSET	7,174	7,075	7,463
AUBURN	14,845	15,005	15,783	COLRAIN	1,552	1,757	1,825
AVON	5,026	4,558	4,460	CONCORD	16,293	17,076	18,271
AYER	6,993	6,871	6,288	CONWAY	1,213	1,529	1,811
BARNSTABLE	30,898	40,949	47,188	CUMMINGTON	657	785	917
BARRE	4,102	4,546	5,144	DALTON	6,797	7,155	6,876
BECKET	1,339	1,481	1,754	DANVERS	24,100	24,174	25,523
BEDFORD	13,067	12,996	12,289	DARTMOUTH	23,966	27,244	31,019
BELCHERTOWN	8,339	10,579	12,844	DEDHAM	25,298	23,782	23,288
BELLINGHAM	14,300	14,877	15,567	DEERFIELD	4,517	5,018	5,109
BELMONT	26,100	24,720	25,035	DENNIS	12,360	13,864	15,139
BERKLEY	2,731	4,237	5,750	DIGHTON	5,352	5,631	6,316
BERLIN	2,215	2,293	2,386	DOUGLAS	3,730	5,438	6,744
BERNARDSTON	1,750	2,048	2,119	DOVER	4,703	4,915	5,763
BEVERLY	37,655	38,195	40,210	DRACUT	21,249	25,594	28,585
BILLERICA	36,727	37,609	38,688	DUDLEY	8,717	9,540	10,009
BLACKSTONE	6,570	8,023	9,020	DUNSTABLE	1,671	2,236	2,893
BLANDFORD	1,038	1,187	1,212	DUXBURY	11,807	13,895	14,862
BOLTON	2,530	3,134	4,239	EAST BRIDGEWATER	9,945	11,104	13,322
BOSTON	562,994	574,283	576,554	EAST BROOKFIELD	1,955	2,033	2,166
BOURNE	13,874	16,064	17,834	EAST LONGMEADOW	12,905	13,367	14,435
BOXBOROUGH	3,126	3,343	4,788	EASTHAM	3,472	4,462	5,170
BOXFORD	5,374	6,266	8,378	EASTHAMPTON	15,580	15,537	15,963
BOYLSTON	3,470	3,517	3,907	EASTON	16,623	19,807	22,437
BRAINTREE	36,337	33,836	34,095	EDGARTOWN	2,204	3,062	3,870
BREWSTER	5,226	8,440	10,110	EGREMONT	1,311	1,229	1,312
BRIDGEWATER	17,202	21,249	25,480	ERVING	1,326	1,372	1,484
BRIMFIELD	2,318	3,001	3,358	ESSEX	2,998	3,260	3,240
BROCKTON	95,172	92,788	92,700	EVERETT	37,195	35,701	37,494
BROOKFIELD	2,397	2,968	3,136	FAIRHAVEN	15,759	16,132	16,119
BROOKLINE	55,062	54,718	58,917	FALL RIVER	92,574	92,703	90,655
BUCKLAND	1,864	1,928	1,973	FALMOUTH	23,640	27,960	30,970
BURLINGTON	23,486	23,302	24,082	FITCHBURG	39,580	41,194	39,613

Table F-3 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 Census

City/Town	1980	1990	2000	City/Town	1980	1990	2000
FLORIDA	730	742	768	LANESBOROUGH	3,131	3,032	3,110
FOXBOROUGH	14,148	14,637	16,462	LAWRENCE	63,175	70,207	71,228
FRAMINGHAM	65,113	64,989	66,773	LEE	6,247	5,849	5,937
FRANKLIN	18,217	22,095	29,267	LEICESTER	9,446	10,191	10,439
FREETOWN	7,058	8,522	8,896	LENOX	6,523	5,069	4,931
GARDNER	17,900	20,125	21,154	LEOMINSTER	34,508	38,145	41,631
GEORGETOWN	5,687	6,384	7,543	LEVERETT	1,471	1,785	1,867
GILL	1,259	1,583	1,523	LEXINGTON	29,479	28,974	31,090
GLOUCESTER	27,768	28,716	29,905	LEYDEN	498	662	777
GOSHEN	651	830	923	LINCOLN	7,098	7,666	8,563
GOSNOLD	63	98	123	LITTLETON	6,970	7,051	8,048
GRAFTON	11,238	13,035	14,881	LONGMEADOW	16,301	15,467	15,460
GRANBY	5,380	5,565	6,063	LOWELL	92,418	103,439	105,854
GRANVILLE	1,204	1,403	1,518	LUDLOW	18,150	18,820	19,693
GREAT BARRINGTON	7,405	7,725	7,828	LUNENBURG	8,405	9,117	9,394
GREENFIELD	18,436	18,666	18,031	LYNN	78,471	81,245	86,298
GROTON	6,154	7,511	9,401	LYNNFIELD	11,267	11,274	11,799
GROVELAND	5,040	5,214	6,041	MALDEN	53,386	53,884	55,064
HADLEY	4,125	4,231	4,663	MANCHESTER	5,424	5,286	5,391
HALIFAX	5,513	6,526	7,513	MANSFIELD	13,453	16,568	21,476
HAMILTON	6,960	7,280	8,427	MARBLEHEAD	20,126	19,971	20,771
HAMPDEN	4,745	4,709	4,891	MARION	3,932	4,496	5,560
HANCOCK	643	628	727	MARLBOROUGH	30,617	31,813	35,157
HANOVER	11,358	11,912	13,412	MARSHFIELD	20,916	21,531	23,822
HANSON	8,617	9,028	9,429	MASHPEE	3,700	7,884	11,568
HARDWICK	2,272	2,385	2,684	MATTAPOISETT	5,597	5,850	6,249
HARVARD	12,170	12,329	9,885	MAYNARD	9,590	10,325	10,585
HARWICH	8,971	10,275	11,828	MEDFIELD	10,220	10,531	12,213
HATFIELD	3,045	3,184	3,205	MEDFORD	58,076	57,407	56,916
HAVERHILL	46,865	51,418	58,119	MEDWAY	8,447	9,931	12,101
HAWLEY	280	317	339	MELROSE	30,055	28,150	26,912
HEATH	482	716	822	MENDON	3,108	4,010	5,125
HINGHAM	20,339	19,821	20,530	MERRIMAC	4,451	5,166	6,337
HINSDALE	1,707	1,959	2,009	METHUEN	36,701	39,990	42,966
HOLBROOK	11,140	11,041	11,017	MIDDLEBOROUGH	16,404	17,867	19,983
HOLDEN	13,336	14,628	15,875	MIDDLEFIELD	385	392	503
HOLLAND	1,589	2,185	2,412	MIDDLETON	4,135	4,921	7,056
HOLLISTON	12,622	12,926	14,432	MILFORD	23,390	25,355	25,897
HOLYOKE	44,678	43,704	40,504	MILLBURY	11,808	12,228	12,636
HOPEDALE	3,905	5,666	6,071	MILLIS	6,908	7,613	7,836
HOPKINTON	7,114	9,191	12,756	MILLVILLE	1,693	2,236	2,786
HUBBARDSTON	1,797	2,797	3,844	MILTON	25,860	25,725	26,725
HUDSON	16,408	17,233	17,951	MONROE	179	115	102
HULL	9,714	10,466	11,200	MONSON	7,315	7,776	8,835
HUNTINGTON	1,804	1,987	2,236	MONTAGUE	8,011	8,316	8,095
IPSWICH	11,158	11,873	12,566	MONTEREY	818	805	925
KINGSTON	7,362	9,045	11,242	MONTGOMERY	637	759	709
LAKEVILLE	5,931	7,785	9,668	MOUNT WASHINGTON	93	135	152
LANCASTER	6,334	6,661	7,432	NAHANT	3,947	3,828	3,748

**Table F-3 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
NANTUCKET	5,087	6,012	8,651	READING	22,678	22,539	23,953
NATICK	29,461	30,510	32,094	REHOBOTH	7,570	8,656	10,188
NEEDHAM	27,901	27,557	28,427	REVERE	42,423	42,786	43,681
NEW ASHFORD	159	192	238	RICHMOND	1,659	1,677	1,740
NEW BEDFORD	98,478	99,922	94,347	ROCHESTER	3,205	3,921	4,623
NEW BRAINTREE	671	881	997	ROCKLAND	15,695	16,123	17,608
NEW MARLBOROUGH	1,160	1,240	1,538	ROCKPORT	6,345	7,482	8,043
NEW SALEM	688	802	898	ROWE	336	378	371
NEWBURY	4,529	5,623	6,666	ROWLEY	3,867	4,452	5,434
NEWBURYPORT	15,900	16,317	16,988	ROYALSTON	955	1,147	1,205
NEWTON	83,622	82,585	87,211	RUSSELL	1,570	1,594	1,734
NORFOLK	6,363	9,270	10,506	RUTLAND	4,334	4,936	6,123
NORTH ADAMS	18,063	16,797	15,675	SALEM	38,220	38,091	40,348
NORTH ANDOVER	20,129	22,792	26,785	SALISBURY	5,973	6,882	7,554
NORTH ATTLEBORO	21,095	25,038	26,858	SANDISFIELD	720	667	801
NORTH BROOKFIELD	4,150	4,708	4,893	SANDWICH	8,727	15,489	19,908
NORTH READING	11,455	12,002	13,250	SAUGUS	24,746	25,549	25,898
NORTHAMPTON	29,286	29,289	29,435	SAVOY	644	634	697
NORTHBOROUGH	10,568	11,929	13,698	SCITUATE	17,317	16,786	17,380
NORTHBRIDGE	12,246	13,371	13,573	SEEKONK	12,269	13,046	13,789
NORTHFIELD	2,386	2,838	2,955	SHARON	13,601	15,517	17,276
NORTON	12,690	14,265	17,214	SHEFFIELD	2,743	2,910	3,347
NORWELL	9,182	9,279	9,981	SHELBURNE	2,002	2,012	2,178
NORWOOD	29,711	28,700	28,779	SHERBORN	4,049	3,989	4,284
OAK BLUFFS	1,984	2,804	3,692	SHIRLEY	5,124	6,118	7,143
OAKHAM	994	1,503	1,762	SHREWSBURY	22,674	24,146	30,390
ORANGE	6,844	7,312	7,710	SHUTESBURY	1,049	1,561	1,954
ORLEANS	5,306	5,838	6,434	SOMERSET	18,813	17,655	18,067
OTIS	963	1,073	1,281	SOMERVILLE	77,372	76,210	77,838
OXFORD	11,680	12,588	13,457	SOUTH HADLEY	16,399	16,685	17,678
PALMER	11,389	12,054	12,564	SOUTHAMPTON	4,137	4,478	5,321
PAXTON	3,762	4,047	4,551	SOUTHBOROUGH	6,193	6,628	8,419
PEABODY	45,976	47,039	49,595	SOUTHBRIDGE	16,665	17,816	17,489
PELHAM	1,112	1,373	1,463	SOUTHWICK	7,382	7,667	8,885
PEMBROKE	13,487	14,544	16,433	SPENCER	10,774	11,645	11,907
PEPPERELL	8,061	10,098	11,435	SPRINGFIELD	152,319	156,983	151,292
PERU	633	779	850	STERLING	5,440	6,481	7,416
PETERSHAM	1,024	1,131	1,212	STOCKBRIDGE	2,328	2,408	2,315
PHILLIPSTON	953	1,485	1,814	STONEHAM	21,424	22,203	22,020
PITTSFIELD	51,974	48,622	46,284	STOUGHTON	26,710	26,777	28,133
PLAINFIELD	425	571	594	STOW	5,144	5,328	5,715
PLAINVILLE	5,857	6,871	7,913	STURBRIDGE	5,976	7,775	8,082
PLYMOUTH	35,913	45,608	51,447	SUDBURY	14,027	14,358	16,260
PLYMPTON	1,974	2,384	2,690	SUNDERLAND	2,929	3,399	3,792
PRINCETON	2,425	3,189	3,470	SUTTON	5,855	6,824	8,153
PROVINCETOWN	3,536	3,561	3,372	SWAMPSCOTT	13,837	13,650	14,704
QUINCY	84,743	84,985	87,570	SWANSEA	15,461	15,411	16,079
RANDOLPH	28,218	30,093	31,630	TAUNTON	45,001	49,832	55,183
RAYNHAM	9,085	9,867	11,525	TEMPLETON	6,070	6,438	6,955

**Table F-3 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
TEWKSBURY	24,635	27,266	29,603	WINCHESTER	20,701	20,267	20,892
TISBURY	2,972	3,120	3,674	WINDSOR	598	770	839
TOLLAND	235	289	396	WINTHROP	19,294	18,127	17,750
TOPSFIELD	5,709	5,754	6,330	WOBURN	36,626	35,943	37,148
TOWNSEND	7,201	8,496	9,424	WORCESTER	161,799	169,759	170,915
TRURO	1,486	1,573	1,960	WORTHINGTON	932	1,156	1,305
TYNGSBOROUGH	5,683	8,642	10,716	WRENTHAM	7,580	9,006	10,515
TYRINGHAM	344	369	391	YARMOUTH	18,449	21,174	23,767
UPTON	3,886	4,677	5,540				
UXBRIDGE	8,374	10,415	11,752	Statewide Totals	5,640,985	5,919,881	
WAKEFIELD	24,895	24,825	25,045				
WALES	1,177	1,566	1,759				
WALPOLE	18,859	20,212	23,085				
WALTHAM	58,200	57,878	59,243				
WARE	8,953	9,808	9,820				
WAREHAM	18,457	19,232	20,575				
WARREN	3,777	4,437	4,815				
WARWICK	603	740	778				
WASHINGTON	587	615	572				
WATERTOWN	34,384	33,284	32,399				
WAYLAND	12,170	11,874	13,128				
WEBSTER	14,480	16,196	16,313				
WELLESLEY	27,209	26,615	27,716				
WELLFLEET	2,209	2,493	2,687				
WENDELL	694	899	1,062				
WENHAM	3,897	4,212	5,014				
WEST BOYLSTON	6,204	6,611	7,508				
WEST BRIDGEWATER	6,359	6,389	6,760				
WEST BROOKFIELD	3,026	3,532	3,683				
WEST NEWBURY	2,861	3,421	4,027				
WEST SPRINGFIELD	27,042	27,537	28,425				
WEST STOCKBRIDGE	1,280	1,483	1,447				
WEST TISBURY	1,010	1,704	2,338				
WESTBOROUGH	13,619	14,133	17,320				
WESTFIELD	36,465	38,372	40,511				
WESTFORD	13,434	16,392	20,130				
WESTHAMPTON	1,137	1,327	1,515				
WESTMINSTER	5,139	6,191	7,014				
WESTON	11,169	10,200	11,316				
WESTPORT	13,763	13,852	14,805				
WESTWOOD	13,212	12,557	14,015				
WEYMOUTH	55,601	54,063	53,878				
WHATELY	1,341	1,375	1,466				
WHITMAN	13,534	13,240	13,580				
WILBRAHAM	12,053	12,635	13,478				
WILLIAMSBURG	2,237	2,515	2,599				
WILLIAMSTOWN	8,741	8,220	8,731				
WILMINGTON	17,471	17,651	20,839				
WINCHENDON	7,019	8,805	9,532				

**Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
0 - 4	1980	337,215	173,029	164,186
	1985	379,282	194,237	185,045
	1990	421,349	215,445	205,904
	1991	424,617	217,179	207,438
	1992	425,142	217,537	207,605
	1993	424,647	217,471	207,176
	1994	421,986	216,493	205,493
	1995	415,741	213,448	202,293
	1996	409,660	210,345	199,315
	1997	404,223	207,394	196,829
	1998	399,860	204,983	194,877
	1999	399,310	204,397	194,913
	2000	397,268	203,062	194,206
	2001	390,178	199,346	190,832
	2002	394,810	201,751	193,059
5 - 9	1980	374,734	191,602	183,132
	1985	375,677	192,542	183,135
	1990	376,619	193,482	183,137
	1991	384,465	197,306	187,159
	1992	388,956	199,564	189,392
	1993	392,430	201,241	191,189
	1994	399,236	204,404	194,832
	1995	404,660	206,980	197,680
	1996	410,066	209,813	200,253
	1997	414,757	212,313	202,444
	1998	414,810	212,483	202,327
	1999	423,609	217,197	206,412
	2000	430,861	221,145	209,716
	2001	413,188	211,921	201,267
	2002	408,718	209,582	199,136
10 - 14	1980	461,332	235,669	225,663
	1985	404,174	206,784	197,390
	1990	347,016	177,899	169,117
	1991	355,502	182,288	173,214
	1992	358,775	184,070	174,705
	1993	363,655	186,671	176,984
	1994	368,790	189,353	179,437
	1995	372,452	191,298	181,154
	1996	380,540	195,292	185,248
	1997	388,421	199,263	189,158
	1998	391,860	200,941	190,919
	1999	412,311	211,441	200,870
	2000	431,247	221,168	210,079
	2001	431,303	221,113	210,190
	2002	436,640	223,771	212,869

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
15 - 19	1980	548,239	274,859	273,380
	1985	482,135	242,074	240,061
	1990	416,030	209,289	206,741
	1991	391,939	197,402	194,537
	1992	383,111	192,951	190,160
	1993	383,138	192,863	190,275
	1994	389,017	195,597	193,420
	1995	397,926	200,053	197,873
	1996	407,088	204,859	202,229
	1997	410,740	207,139	203,601
	1998	418,478	211,026	207,452
	1999	417,862	211,120	206,742
	2000	415,737	210,460	205,277
	2001	409,422	209,348	200,074
	2002	409,688	210,256	199,432
20 - 24	1980	552,902	270,713	282,189
	1985	535,048	263,685	271,363
	1990	517,194	256,657	260,537
	1991	514,576	255,360	259,216
	1992	516,059	256,092	259,967
	1993	508,509	252,385	256,124
	1994	497,732	247,056	250,676
	1995	486,412	241,442	244,970
	1996	469,010	232,807	236,203
	1997	463,895	230,140	233,755
	1998	465,352	230,886	234,466
	1999	435,534	215,192	220,342
	2000	404,279	198,756	205,523
	2001	425,247	209,206	216,041
	2002	432,849	213,925	218,924
25 - 29	1980	489,175	239,341	249,834
	1985	522,748	258,318	264,430
	1990	556,320	277,295	279,025
	1991	540,234	268,978	271,256
	1992	529,711	263,810	265,901
	1993	518,304	258,294	260,010
	1994	512,557	255,973	256,584
	1995	510,664	255,351	255,313
	1996	514,088	257,258	256,830
	1997	511,765	256,137	255,628
	1998	502,345	251,390	250,955
	1999	468,891	232,721	236,170
	2000	434,024	213,376	220,648
	2001	422,879	208,425	214,454
	2002	416,009	204,894	211,115

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
30 - 34	1980	446,395	217,649	228,746
	1985	494,363	243,175	251,188
	1990	542,330	268,701	273,629
	1991	547,724	272,103	275,621
	1992	543,398	270,256	273,142
	1993	539,945	268,647	271,298
	1994	537,869	267,675	270,194
	1995	529,735	263,782	265,953
	1996	518,478	258,141	260,337
	1997	512,473	255,510	256,963
	1998	502,992	251,066	251,926
	1999	498,617	247,105	251,512
	2000	492,764	242,386	250,378
	2001	492,792	242,263	250,529
	2002	484,509	238,470	246,039
35 - 39	1980	348,552	169,502	179,050
	1985	414,863	203,352	211,511
	1990	481,174	237,202	243,972
	1991	492,003	242,601	249,402
	1992	501,299	247,290	254,009
	1993	508,723	251,039	257,684
	1994	517,102	255,251	261,851
	1995	522,467	258,017	264,450
	1996	527,036	260,758	266,278
	1997	525,899	260,595	265,304
	1998	522,796	259,389	263,407
	1999	532,463	263,328	269,135
	2000	540,593	266,507	274,086
	2001	538,710	265,684	273,026
	2002	527,402	260,018	267,384
40 - 44	1980	278,748	134,925	143,823
	1985	356,061	173,162	182,899
	1990	433,374	211,399	221,975
	1991	452,459	221,123	231,336
	1992	448,133	219,257	228,876
	1993	450,944	220,919	230,025
	1994	458,221	224,614	233,607
	1995	466,848	229,037	237,811
	1996	477,644	234,298	243,346
	1997	489,729	240,396	249,333
	1998	496,569	243,966	252,603
	1999	510,253	250,285	259,968
	2000	522,402	255,838	266,564
	2001	537,406	263,687	273,719
	2002	537,951	264,609	273,342

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
45 - 49	1980	278,261	134,444	143,817
	1985	305,798	148,540	157,258
	1990	333,334	162,636	170,698
	1991	347,758	169,614	178,144
	1992	372,449	181,639	190,810
	1993	388,267	189,222	199,045
	1994	405,627	197,458	208,169
	1995	424,194	206,334	217,860
	1996	440,676	214,576	226,100
	1997	439,700	214,255	225,445
	1998	442,352	215,783	226,569
	1999	452,918	220,796	232,122
	2000	461,945	225,029	236,916
	2001	479,151	233,606	245,545
	2002	488,975	238,190	250,785
50 - 54	1980	306,574	146,211	160,363
	1985	284,588	136,396	148,192
	1990	262,601	126,581	136,020
	1991	266,799	128,835	137,964
	1992	274,537	132,602	141,935
	1993	291,124	140,790	150,334
	1994	305,629	148,204	157,425
	1995	317,854	154,500	163,354
	1996	331,747	161,214	170,533
	1997	359,036	174,461	184,575
	1998	376,308	182,775	193,533
	1999	394,565	191,345	203,220
	2000	411,408	199,205	212,203
	2001	437,266	211,839	225,427
	2002	431,172	208,803	222,369
55 - 59	1980	310,995	145,603	165,392
	1985	281,585	132,889	148,696
	1990	252,174	120,175	131,999
	1991	243,598	116,332	127,266
	1992	239,741	114,800	124,941
	1993	238,223	114,215	124,008
	1994	240,256	115,150	125,106
	1995	243,035	116,491	126,544
	1996	248,445	119,247	129,198
	1997	258,444	124,059	134,385
	1998	275,482	132,476	143,006
	1999	293,440	141,003	152,437
	2000	310,002	148,841	161,161
	2001	325,492	156,205	169,287
	2002	351,475	168,863	182,612



**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
60 - 64	1980	277,384	126,323	151,061
	1985	269,645	123,966	145,679
	1990	261,905	121,609	140,296
	1991	252,853	117,797	135,056
	1992	243,758	113,682	130,076
	1993	236,302	110,383	125,919
	1994	229,887	107,716	122,171
	1995	225,426	105,979	119,447
	1996	221,450	104,381	117,069
	1997	220,318	104,206	116,112
	1998	220,073	104,333	115,740
	1999	228,893	108,256	120,637
	2000	236,405	111,504	124,901
	2001	244,247	115,421	128,826
	2002	252,593	119,505	133,088
65 - 69	1980	235,574	101,023	134,551
	1985	243,479	105,724	137,755
	1990	251,383	110,424	140,959
	1991	242,200	107,138	135,062
	1992	239,439	106,603	132,836
	1993	236,419	106,028	130,391
	1994	233,259	105,261	127,998
	1995	229,328	103,887	125,441
	1996	226,174	102,090	124,084
	1997	220,342	99,675	120,667
	1998	224,578	102,051	122,527
	1999	221,157	100,777	120,380
	2000	216,498	98,882	117,616
	2001	211,693	97,516	114,177
	2002	208,031	95,834	112,197
70 - 74	1980	187,041	73,235	113,806
	1985	197,186	79,388	117,798
	1990	207,331	85,541	121,790
	1991	206,064	85,541	120,523
	1992	207,286	86,411	120,875
	1993	207,610	86,774	120,836
	1994	209,543	88,009	121,534
	1995	211,201	89,345	121,856
	1996	210,014	88,742	121,272
	1997	209,512	89,113	120,399
	1998	217,425	93,318	124,107
	1999	214,991	92,667	122,324
	2000	211,332	91,416	119,916
	2001	206,665	89,544	117,121
	2002	201,885	87,724	114,161

**Table F-4 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
75 - 79	1980	137,828	48,145	89,683
	1985	148,741	53,591	95,150
	1990	159,653	59,037	100,616
	1991	157,534	59,176	98,358
	1992	157,819	59,824	97,995
	1993	158,987	60,752	98,235
	1994	161,268	62,072	99,196
	1995	162,986	63,262	99,724
	1996	166,496	64,548	101,948
	1997	169,323	66,029	103,294
	1998	178,254	69,719	108,535
	1999	182,156	72,061	110,095
	2000	184,941	73,829	111,112
	2001	184,811	74,287	110,524
	2002	184,724	75,232	109,492
80 - 84	1980	92,180	28,513	63,667
	1985	99,240	30,991	68,249
	1990	106,299	33,468	72,831
	1991	106,558	33,989	72,569
	1992	108,271	34,969	73,302
	1993	109,369	35,782	73,587
	1994	110,817	36,721	74,096
	1995	112,913	37,919	74,994
	1996	114,039	38,664	75,375
	1997	114,787	39,273	75,514
	1998	121,228	41,932	79,296
	1999	126,467	44,435	82,032
	2000	130,699	46,464	84,235
	2001	134,896	48,601	86,295
	2002	136,865	49,486	87,379
85+	1980	73,908	20,107	53,801
	1985	82,124	21,006	61,118
	1990	90,339	21,905	68,434
	1991	91,218	22,231	68,987
	1992	99,184	24,479	74,705
	1993	106,943	26,789	80,154
	1994	107,996	27,258	80,738
	1995	108,970	27,600	81,370
	1996	111,703	28,439	83,264
	1997	114,258	29,558	84,700
	1998	120,501	31,447	89,054
	1999	119,093	31,435	87,658
	2000	116,692	30,948	85,744
	2001	121,247	33,490	87,757
	2002	125,466	35,910	89,556

**Table F-4. (continued) Population Counts and Estimates, Massachusetts: 1980, 1985-2002**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
TOTAL	1980	5,737,037	2,730,893	3,006,144
	1985	5,876,737	2,809,820	3,066,917
	1990	6,016,425	2,888,745	3,127,680
	1991	6,018,101	2,894,993	3,123,108
	1992	6,037,068	2,905,836	3,131,232
	1993	6,063,539	2,920,265	3,143,274
	1994	6,106,792	2,944,265	3,162,527
	1995	6,142,812	2,964,725	3,178,087
	1996	6,184,354	2,985,472	3,198,882
	1997	6,227,622	3,009,516	3,218,106
	1998	6,291,263	3,039,964	3,251,299
	1999	6,332,530	3,055,561	3,276,969
	2000	6,349,097	3,058,816	3,290,281
	2001	6,406,593	3,091,502	3,315,091
	2002	6,429,761	3,106,822	3,322,939



## APPENDICES



		DEPARTMENT OF PUBLIC HEALTH REGISTRY OF VITAL RECORDS AND STATISTICS STANDARD CERTIFICATE OF LIVE BIRTH				LOCAL HEALTH DEPARTMENT RETURN	
PLACE OF BIRTH	3	3B. CITY/TOWN				3E. REGISTERED NUMBER	
	1	3A. FACILITY NAME—IF NOT IN FACILITY, NUMBER AND STREET					
FACILITY NUMBER (USE ONLY)	L	NAME		4A. FIRST	4B. MIDDLE	4C. LAST	
	D	5. SEX	6A. PLURALITY (Specify Single, Twin, etc.)		6B. BIRTH ORDER (If not single, Specify Order: First, Second, etc.)		7. TIME M
Y NUMBER	C	8A. SIGNATURE (I Certify that the Child was Born Alive at Date and Time and Place Stated)		9B. TYPE OR PRINT NAME		9C. LICENSE NUMBER	
	E	9D. NO. & STREET		9E. CITY/TOWN	9F. STATE	9G. ZIP CODE	9H. DATE SIGNED (Month, Day, Year)
REFERENCE	F	9I. TYPE <input type="checkbox"/> AT-BIRTH <input type="checkbox"/> POST-NATAL <input type="checkbox"/> CERTIFIER ONLY <input type="checkbox"/> MIDWIFE <input type="checkbox"/> OTHER					
	M	NAME		10A. FIRST	10B. MIDDLE	10C. LAST	10D. MAIDEN SURNAME
MOTHER	B	BIRTHPLACE		11A. CITY/TOWN	11B. STATE/COUNTRY		12. DATE OF BIRTH (Month, Day, Year)
	R	RESIDENCE (Do not use mailing address)		13A. NUMBER AND STREET	13B. CITY/TOWN	13C. COUNTY	13D. STATE 13E. ZIP CODE
FATHER	F	NAME		14A. FIRST	14B. MIDDLE	14C. LAST	
	R	BIRTHPLACE		15A. CITY/TOWN	15B. STATE/COUNTRY		16. DATE OF BIRTH (Month, Day, Year)
SECURITY CARD	I	17A. I (WE) CERTIFY THAT THE PERSONAL INFORMATION APPEARING ABOVE IS TRUE AND CORRECT.					17B. RELATIONSHIP TO CHILD
INITIALS NOT COPY	N	17C. DATE SIGNED (Month, Day, Year)		17D. MAILING ADDRESS (If different from item # 13 above)		CITY	STATE ZIP CODE
	C	18. DATE OF RECORD (Month, Day, Year)		19. SUPPLEMENT FILED (Month, Day, Year)		20. CLERK/REGISTRAR	
INITIALS	C	21. CLERK/REGISTRAR DPH USE ONLY					



The Commonwealth of Massachusetts

STANDARD CERTIFICATE OF DEATH  
REGISTRY OF VITAL RECORDS AND STATISTICS

REGISTERED NUMBER

STATE USE ONLY

FOR USE BY  
PHYSICIANS AND  
MEDICAL EXAMINERS

STATE USE ONLY

PLACE

NOGP

TYPE

RET.

INSP

EDUC.

AGE

NATIVITY

MARITAL

RESID.

OUT-STATE

DISP.

AUTOP.

MED EXAM

BARBER

WORKING

PLACE

CERT

IN PRO

DECEDENT

INFORMANT

DISPOSITION

CERTIFIER

DECEDENT - NAME FIRST		MIDDLE		LAST		SEX	DATE OF DEATH (Mo., Day, Yr.)	
1		2		3		4		
PLACE OF DEATH (City/Town)		COUNTY OF DEATH		HOSPITAL OR OTHER INSTITUTION - Name (If not in either, give street and number)				
4a		4b		4c		5		
PLACE OF DEATH (Check only one): HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> Outpatient <input type="checkbox"/> DOA OTHER: <input type="checkbox"/> Nursing Home <input type="checkbox"/> Residence <input type="checkbox"/> Other (Specify)				SOCIAL SECURITY NUMBER		IF US WAR VETERAN SPECIFY WAR		
5				6		7		
WAS DECEDENT OF HISPANIC ORIGIN? (If yes, Specify Puerto Rican, Dominican, Cuban, etc.) C: NO <input type="checkbox"/> YES <input type="checkbox"/> 8a Specify:				RACE (e.g. White, Black, American Indian, etc.) (Specify)		DECEDENT'S EDUCATION (Highest Grade Completed) Elem/Sec (0-12)   College (1-4, 5+)		
8b				8c		9		
AGE - Last Birthday (Yrs.)		UNDER 1 YEAR MOS : DAYS		UNDER 1 DAY HOURS : MINS		DATE OF BIRTH (Mo., Day, Yr.)		
10a		10b		10c		10d		
MARRIED, NEVER MARRIED WIDOWED OR DIVORCED		LAST SPOUSE (If wife, give maiden name)		USUAL OCCUPATION (Prior - if retired)		KIND OF BUSINESS OR INDUSTRY		
12		13		14a		14b		
RESIDENCE - NO. & ST., CITY/TOWN, COUNTY, STATE, ZIP CODE						ZIP CODE		
15a						15b		
FATHER - FULL NAME		MOTHER - NAME (Given)		MOTHER - NAME (Maiden)		STATE OF BIRTH (If not in US, name country)		
16		17		18		19		
INFORMANT'S NAME		MAILING ADDRESS - NO. & ST., CITY/TOWN, STATE, ZIP CODE					RELATIONSHIP	
20		21					22	
METHOD OF DISPOSITION <input type="checkbox"/> BURIAL <input type="checkbox"/> CREMATION <input type="checkbox"/> ENTOMBMENT <input type="checkbox"/> REMOVAL FROM STATE 23 <input type="checkbox"/> DONATION <input type="checkbox"/> OTH. SPEC.		FUNERAL SERVICE LICENSEE LICENSE #						
23		24					25	
PLACE OF DISPOSITION (Name of Cemetery, Crematory or other)				LOCATION (City/Town, State)				
26a				26b				
DATE OF DISPOSITION (Mo., Day, Yr.)		NAME AND ADDRESS OF FACILITY						
27		28a/b						
29 PART I - Enter the diseases, injuries, or complications that caused the death. Do not use only the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. List only one cause on each line (a through d). PRINT OR TYPE LEGIBLY. IMMEDIATE CAUSE (Final disease or condition resulting in death) → Sequently list conditions, if any leading to immediate cause. Enter UNDERLYING CAUSE (disease or injury that initiated events resulting in death) LAST. a. _____ b. _____ c. _____ d. _____ PART II - Other significant conditions contributing to death, not mentioned in underlying cause given in Part I. 30 _____ 31 _____ 32 _____ 33 _____ 34 _____ 35a _____ 35b _____ 35c _____ 36a _____ 36b _____ 36c _____ 36d _____ 37a _____ 37b _____ 37c _____ 37d _____ 38 _____ 39 _____ 40a _____ 40b _____ 40c _____ 40d _____ 41 _____ 42 _____ 43 _____								

ACK INK ONLY





COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
**REPORT OF FETAL DEATH**

FORM R-304 8/05

DATE OF RECORD

STATE USE ONLY

FACILITY NUMBER		FACILITY NAME (IF NOT HOSPITAL, GIVE STREET AND NUMBER)				DATE OF DELIVERY (Month Day Year)	
CITY/TOWN OF DELIVERY		COUNTY OF DELIVERY		TIME OF DELIVERY		PLACE OF DEATH	
<b>FETUS</b>						PLURALITY	
						BIRTH ORDER	
SEX		WEIGHT		WEEKS GESTATION AT DELIVERY DATE		DIED BEFORE LABOR / DURING LABOR OR DELIVERY	
<b>MOTHER</b>		CURRENT NAME FIRST		MIDDLE		LAST	
		MAIDEN SURNAME		DATE OF BIRTH		CITY AND STATE/COUNTRY OF BIRTH	
		RESIDENCE ADDRESS NUMBER AND STREET		CITY/TOWN		COUNTY STATE ZIP	
<b>FATHER</b>		CURRENT NAME FIRST		MIDDLE		LAST	
		DATE OF BIRTH				CITY AND STATE/COUNTRY OF BIRTH	
<b>CAUSE OF FETAL DEATH PART I</b>		ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), and (c) SPECIFY FETAL OR MATERNAL					
		IMMEDIATE CAUSE (a)					
		DUE TO OR AS A CONSEQUENCE OF (b)					
		DUE TO OR AS A CONSEQUENCE OF (c)					
<b>PART II</b>		OTHER SIGNIFICANT CONDITIONS OF THE FETUS OR THE MOTHER					
		WAS THE CASE REFERRED TO A MEDICAL EXAMINER?		WAS AN AUTOPSY PERFORMED?		WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO THE COMPLETION OF CAUSE OF DEATH?	
		DATE OF INJURY (MATERNAL)		TIME OF INJURY		INJURY AT WORK PLACE OF INJURY	
		DESCRIBE HOW INJURY OCCURRED				LOCATION OF INJURY	
<b>CERTIFIER</b>		I HEREBY CERTIFY that this delivery occurred on the date stated and the product of conception was not a live birth.					
		Signature of Certifying Physician or Medical Examiner				TITLE	
		Type or Print - Name of Certifying Physician or Medical Examiner				LICENSE #	
		STREET ADDRESS				CITY/TOWN STATE ZIP CODE	
<b>ATTENDANT (if different)</b>		NAME OF PHYSICIAN OR ATTENDANT/ TITLE				LICENSE #	
<b>DISPOSITION</b>		METHOD		PLACE OF DISPOSITION (Name of Cemetery, Crematory, or other facility)		LOCATION (City or Town and State)	
		FUNERAL SERVICE LICENSEE (if any)				LICENSE #	
		NAME OF FACILITY (if any)				DATE OF DISPOSITION	
<b>PERMIT</b>		DATE PERMIT ISSUED		CITY/TOWN ISSUING		ISSUED BY (signature of Health Agent):	

INSTRUCTIONS: Complete a Report of Fetal Death only for fetal deaths of twenty weeks or more gestation OR of a weight of 350 grams or more. Complete front and reverse sides of form within 10 days and send original copy to:

Registry of Vital Records and Statistics/ Natality Data Unit - FD,  
150 Mt. Vernon Street, 1<sup>st</sup> Floor, Dorchester, MA 02125

When forwarding for disposition permit: Do not send the original report to the local Board of Health. Photocopy and forward only the FRONT of this form. The original report must be sent to the Department of Public Health at the address listed above.

THIS CERTIFICATE IS  
NOT TO BE USED  
INSIDE OF  
MASSACHUSETTS.  
IT VALID AFTER:

THIS IS A PERMANENT RECORD.  
Only durable black ink or approved  
typewriter ribbon. Every item of  
information should be carefully supplied.  
CORRECTIONS AND ERASURES IN  
THIS CERTIFICATE ARE FORBIDDEN.  
PENALTY FOR VIOLATION,  
HUNDRED DOLLARS.

CHAP. 201, §§ 28, 28A, 48, 49,  
and CHAP. 46, § 18.

MEDICAL  
CERTIFICATES  
ON FILE

COMMISSION  
ON FILE



Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF MARRIAGE

This certificate must be delivered to the person before whom the  
marriage is to be contracted before he proceeds to solemnize the same

(State file number)

(City or town making record)

Registered No. \_\_\_\_\_

Intention No. \_\_\_\_\_

1 Place of Marriage \_\_\_\_\_

City or Town \_\_\_\_\_

(Do not enter name of village or section of city or town)

2 Date of Marriage \_\_\_\_\_

(Month)

(Day)

(Year)

3 FULL NAME \_\_\_\_\_

GROOM

12 FULL NAME \_\_\_\_\_

BRIDE

3A SURNAME  
AFTER MARRIAGE \_\_\_\_\_

12A SURNAME  
AFTER MARRIAGE \_\_\_\_\_

4 DATE OF BIRTH \_\_\_\_\_

5 OCCUPATION \_\_\_\_\_

13 DATE OF BIRTH \_\_\_\_\_

14 OCCUPATION \_\_\_\_\_

6 RESIDENCE  
NO. & ST. \_\_\_\_\_  
CITY/  
TOWN \_\_\_\_\_

ZIP  
CODE \_\_\_\_\_

15 RESIDENCE  
NO. & ST. \_\_\_\_\_  
CITY/  
TOWN \_\_\_\_\_

ST. \_\_\_\_\_  
ZIP  
CODE \_\_\_\_\_

7 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.) \_\_\_\_\_

8 WIDOWED  
OR DIVORCED \_\_\_\_\_

16 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.) \_\_\_\_\_

17 WIDOWED  
OR DIVORCED \_\_\_\_\_

9 BIRTHPLACE \_\_\_\_\_

(City or town)

(State or country)

18 BIRTHPLACE \_\_\_\_\_

(City or town)

(State or country)

10 MAIDEN NAME  
OF MOTHER \_\_\_\_\_

19 MAIDEN NAME  
OF MOTHER \_\_\_\_\_

11 NAME OF  
FATHER \_\_\_\_\_

20 NAME OF  
FATHER \_\_\_\_\_

21 THE INTENTION OF MARRIAGE by the above-mentioned persons was duly entered by me in the records of the Community \_\_\_\_\_ according to law, this \_\_\_\_\_ day of \_\_\_\_\_

☐ COURT WAIVER

Issued \_\_\_\_\_

(Name of Community)

by \_\_\_\_\_

☐ AGE ORDER

(Month)

(Day)

(Year)

(City or Town Clerk or Registrar)

22 I HEREBY CERTIFY that I joined the above-named persons in marriage at No. \_\_\_\_\_

(If marriage was solemnized in a church, give its NAME instead of street and number)

(Name of Church)

on \_\_\_\_\_

(Month)

(Day)

(Year)

Signature \_\_\_\_\_

Official station \_\_\_\_\_

(Minister of the Gospel, Clergyman, Priest, Rabbi, or Justice of the Peace)

Residence No. \_\_\_\_\_

St., City or Town of \_\_\_\_\_

23 Certificate recorded by city or town clerk \_\_\_\_\_

(Month)

(Day)

(Year)

CLERK OR REGISTRAR

The Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
CERTIFICATE OF ABSOLUTE  
DIVORCE OR ANNULMENT  
(Chap. 208, Sec. 46 G.L.)  
R-408

HUSBAND - NAME		FIRST	MIDDLE	LAST
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
2a.	COUNTY	STATE	2b.	DATE OF BIRTH (Mo., Day, Yr.)
2c.		2d.	3.	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
WIFE - NAME		FIRST	MIDDLE	LAST
5a.				WIDOW NAME
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
6a.	COUNTY	STATE	6b.	DATE OF BIRTH (Mo., Day, Yr.)
6c.		6d.	7.	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
8.	DATE OF THIS MARRIAGE (Mo., Day, Yr.)		NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE	
9.			10a.	
			10b.	
			NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY	
			11.	

<b>FOR COURT USE ONLY</b>			
COUNTY OF JUDGMENT		TITLE OF COURT	
12.	DATE OF JUDGMENT (Mo., Day, Yr.)	13.	TYPE OF JUDGMENT - DIVORCE, ANNULMENT, (Specify)
14.		DATE OF JUDGMENT ABSOLUTE (Mo., Day, Yr.)	
15.	DOCKET NUMBER	16.	NAME OF PLAINTIFF
		17.	
18a.		18b.	
SIGNATURE OF CERTIFYING OFFICIAL		TITLE OF OFFICIAL	



**REGISTRY OF VITAL RECORDS AND STATISTICS  
STAFF**

**REGISTRAR  
Stanley E. Nyberg**

**ADMINISTRATION**

Karin A. Barrett, Assistant Registrar  
Dean L. DiMartino, Director  
Ramona A. Irving, Administrative Assistant  
Pedro Fidalgo  
Tuyet Luong

**INFORMATION TECHNOLOGY**

Howard Wong  
Ian Skolnik

**INFORMATION UNIT**

Charlene J. Zion, Information Officer  
Kevin Y. Foster, Epidemiologist

**REGISTRATION UNIT**

Pauline M. McNulty, Director  
June A. Deloney, Supervisor  
Denise O'Gara, Paralegal  
Crystal Steward, Paralegal  
Tara Andrews  
Irene Chu  
Carolyn Edwards  
Robert E. McMahan  
Pauline McNulty  
Felicia Mohammed  
Venita B. Morabito  
Mary E. Risser  
MaryLou F. Rossetti  
Phyllis Rotman  
Monica Smith

**STATISTICS UNIT**

Jane K. Purtill, Director  
Paul A. Budrow  
Robert A. Coffin III  
Hailekiros Gabreegziabher  
Annie B. Hobbs  
Judy Y. Lim  
Maureen L. McKean  
Ann-Marie Neault  
Waleska Ortiz  
Sharon Pagnano

**RECORDS UNIT**

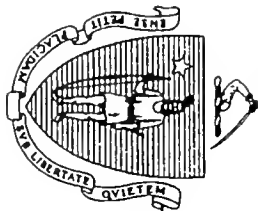
Harold L. Leonard, Supervisor  
Joseph R. Cummings, Supervisor  
Katherine Martinez, Vital Check Coordinator  
Michael Baker  
Christina Bocolos  
Pamela Corbin  
Trevor Hall  
Daniel Martel  
Donald T. McHugh  
Adele L. Pascar  
Simon Smith

BOSTON PUBLIC LIBRARY



3 9999 06351 823 5





Massachusetts Department of Public Health  
Center for Health Information, Statistics, Research and Evaluation  
Registry of Vital Records and Statistics  
150 Mt. Vernon Street, 1<sup>st</sup> floor  
Dorchester MA 02125-3105

